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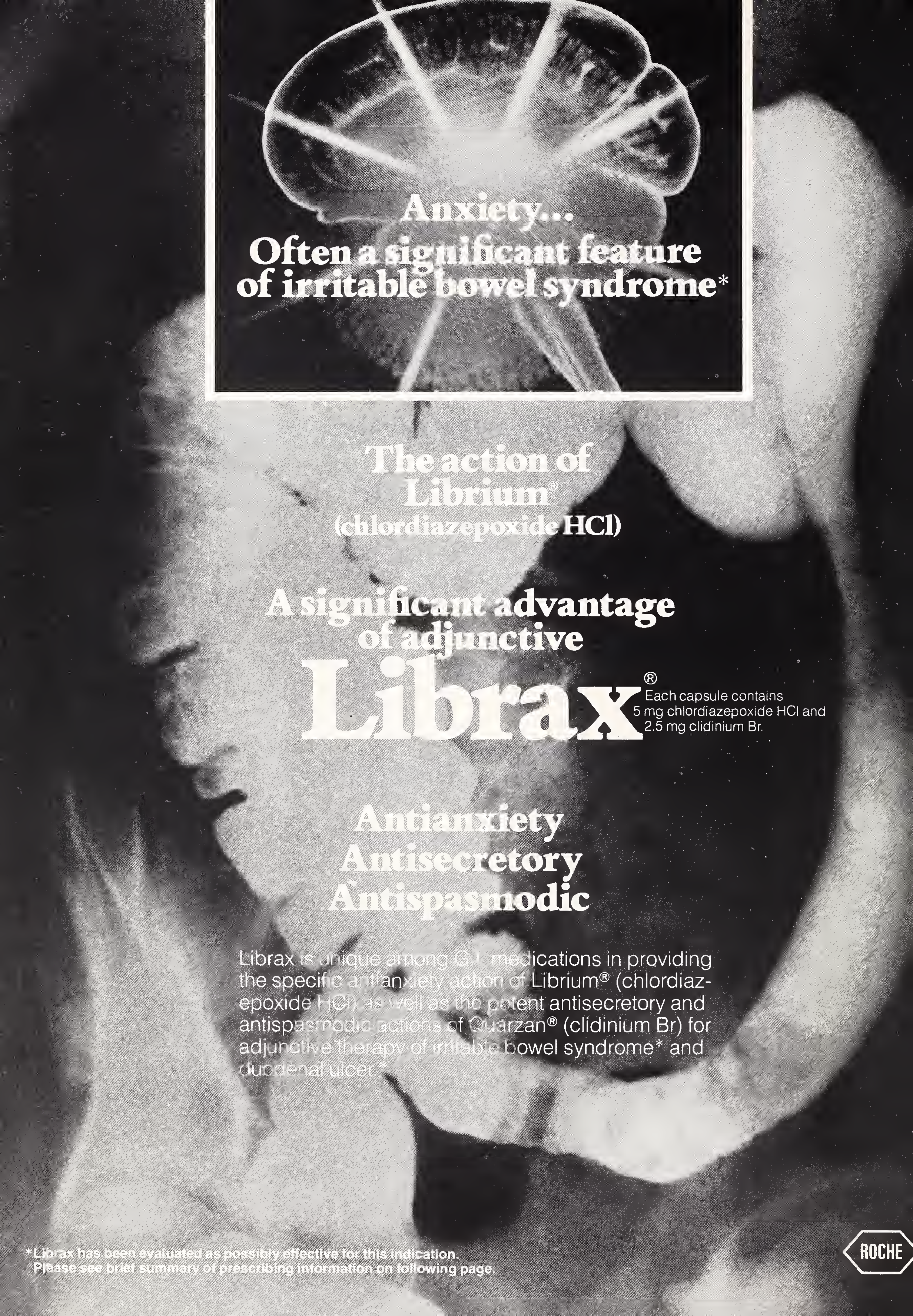

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Medicare and Physician Fees

A survey conducted by the American Medical Association among 208 physicians identified as big Medicare earners by the Department of Health, Education and Welfare revealed an error rate of 65% in the HEW listing.

Of the 16 "top earners"—those identified by HEW as receiving more than $250,000 each from Medicare in 1975—the information released by HEW was wrong in the cases of 14, the AMA survey disclosed.

In all, the HEW report alleged that 409 physicians had each earned more than $100,000 in 1975. However, two of those listed as solo practice physicians were actually hospitals.

The AMA survey, covering physicians in 31 states and the District of Columbia, was made public by AMA Executive Vice President James H. Sammons, M.D., who stated:

"I have forwarded a copy of our survey to Secretary Joseph Califano of HEW. I have also sent him a letter in which I have asked him, as a fair-minded man, to make an apology on behalf of the department to the physicians who have been falsely and unjustly accused."

"Some apology is also due the public," Sammons stated. "What earthly good is the Freedom of Information Act if the information thereby freed is 65% inaccurate?"

"And if the Sunshine in Government Act is to apply, I think the public is entitled to some light on why this list of names, containing such a magnitude of misinformation, was approved for release under the imprimatur of the U.S. government."

"Many of these physicians and their families have been subjected to unwarranted abuse and harassment because of their incorrect identification by HEW. The AMA is going to do what it can to set the record straight, but it truly is incumbent on HEW to clear the names of these physicians."

The AMA survey covered 208 of the 407 physicians identified as physicians in solo practice by HEW. The survey disclosed that in the case of 135 of them, the information attributed to them by HEW was inaccurate—an error rate of 65%.

"We do not know whether that rate would continue if each of the 407 listed physicians were contacted," Dr. Sammons said. "But we do know that the information published by HEW was wrong in the case of 135 of them. So, at a minimum, the error rate among the solo practitioners is at least 33%."

The most common error in the HEW report was the identification of physicians as solo practitioners who actually are members of group practices or, in some cases, are members of hospital staffs and receive a fixed salary.

"Many of the physicians identified as big earners by HEW actually received not one cent of the money attributed to them," Dr Sammons stated. "Others shared the funds with 2 or 3 or as many as 60 other doctors, and in some cases, most of the money attributed to a physician actually went to pay for pacemakers or eye-glasses or renal dialysis."

(continued on page 470)

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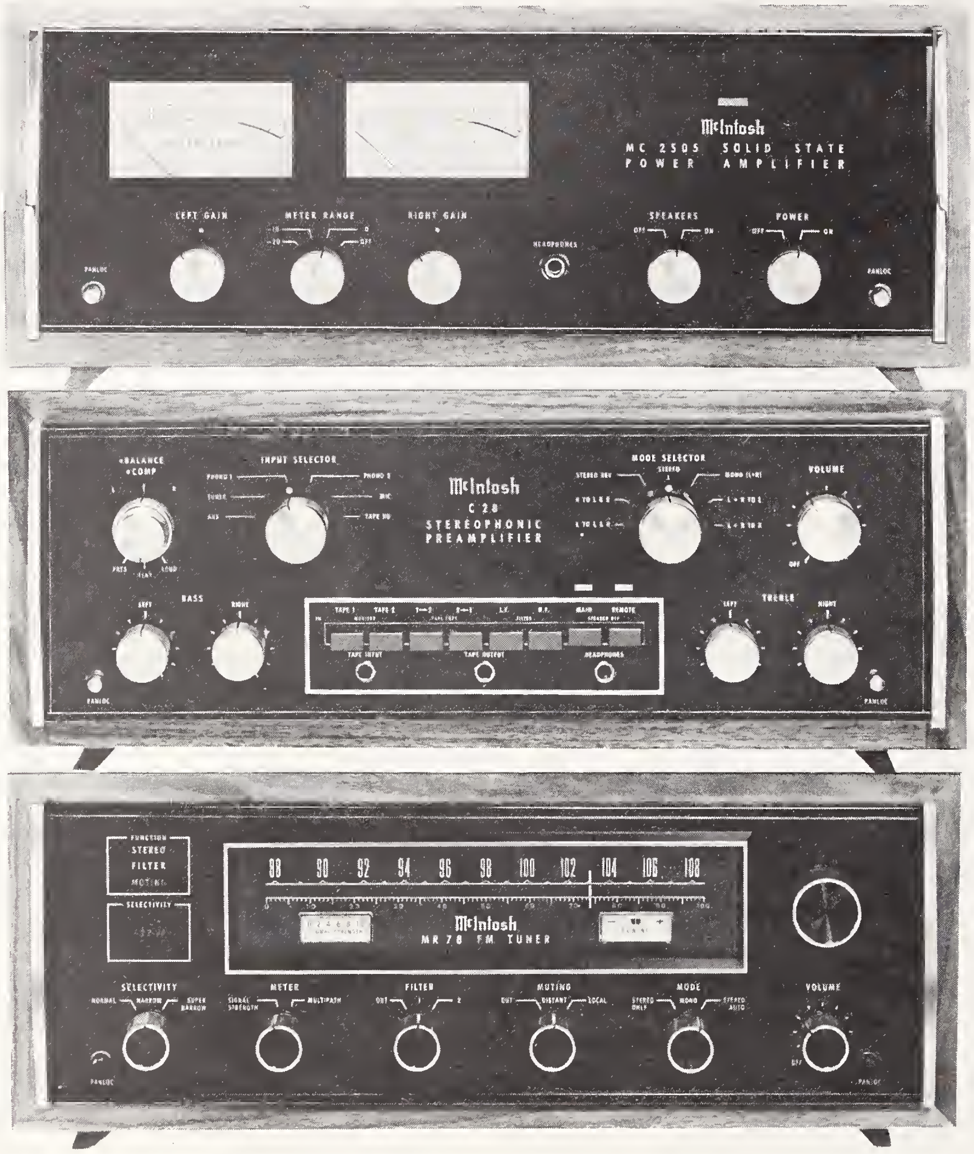
In A Field Crowded With Talented Amateurs . . .



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Abdominal Angina

M. DAVID TILSON, M.D. AND H.C. STANSEL, JR., M.D.

In parallel with the emergence of arteriography and peripheral vascular surgery, new concepts have developed concerning vascular disease of the intestine. Abdominal angina is established as a clinical entity, and acute visceral ischemia is nowadays more often correctly diagnosed and treated. Nevertheless, these conditions merit continuing emphasis, since the early diagnosis of ischemia depends on proper awareness and clinical suspicion. The cost of delay in diagnosis is apparent from the high mortality and morbidity associated with mesenteric infarction; and a gram of prevention is worth kilograms of pharmaceutical administrations in the treatment of established short gut syndrome.

Over 40 years have passed since Dunphy recognized symptoms of abdominal angina as premonitory signs of intestinal infarction;[2] and 20 years have elapsed since abdominal angina was clearly identified as a clinical entity.[4] The first elective revascularizations were performed shortly thereafter.[7] Several hundred revascularizations have been carried out since that time, and panmalabsorption has been recognized as an intestinal dysfunction characteristic of the disease. We have previously reported the following case to show that improvement in intestinal absorption may be sustained for many years following revascularization, and we will present this case again briefly because it illustrates virtually all of the important features of abdominal angina.

Case Report

The patient (BA), a fifty-three-year-old female, was admitted to the Yale-New Haven Hospital with a history of diarrhea, postprandial abdominal pain, and severe weight loss of two years' duration. She had undergone cholecystectomy at another hospital with no relief of her symptoms. In addition, she complained of bilateral calf claudication of progressive intensity. On examination, she was cachectic, weighing only 69 pounds. Significant findings included bilateral carotid bruits, a slightly tender abdomen with no palpable organs or masses, and the absence of all pulses below the level of the umbilicus. Table 1 shows relevant preoperative laboratory data. An upper gastrointestinal series revealed a nonspecific pattern compatible with malabsorption. An aortogram revealed a high grade stenosis of both the superior mesenteric artery and of the celiac axis, with complete occlusion of the aorta below the level of the renal arteries. (Figures 1 and 2)

Table 1

PREOPERATIVE AND POST-OPERATIVE (THREE MONTHS AND EIGHT YEARS) DATA FROM A PATIENT WITH ABDOMINAL ANGINA TREATED BY REVASCULARIZATION

	Pre-op	*Post-op (3 mos.)*	*Post-op (8 yrs.)*
Weight (lbs)	69	98	122
Stool fat (gm/day)	5.5	4.0	1.6
D-Zylose (gm)	1.5	4.1	5.2
Carotenes (ug)	63	313	515
Cholesterol (mg)	120	168	356
Albumin (gm %)	2.5	3.7	4.3
Hematocrit	29	34	43

The abdominal aorta was replaced with a bifurcation graft of Dacron, from which a 10 mm auxiliary graft was interposed to the superior mesenteric artery. (Figure 3) Her postoperative course was relatively smooth, and a postoperative aortogram proved patency of the grafts. (Figures 4 and 5) She began to eat a regular diet without postprandial pain, and she gained weight rapidly. Table 1 indicates follow-up data three months postoperatively. Eight years after the original procedure she was readmitted to the hospital for long-term follow-up studies. Her weight was stable at 176 percent of her preoperative weight, and she was free of abdominal complaints. Good femoral pulses were palpable bilaterally. Table 1 indicates sustained improvement in tests related to absorptive functions of the intestine.

Symptoms

The preceding case illustrates the classic "triad" of complaints with abdominal angina: postprandial pain, weight loss, and diarrhea. More recent observations indicate that diarrhea is inconstant partner of these symptoms. Some patients may complain of

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M. DAVID TILSON, M.D. Assistant Professor of Surgery; and H.C. STANSEL, JR., M.D. Professor of Surgery and Pediatrics; both of Department of Surgery. Yale University School of Medicine.

Reprint requests to: Yale University School of Medicine, 333 Cedar Street, New Haven, CT. (Dr. Tilson).

The following papers were presented at the First Annual Postgraduate Seminar on Vascular Disease, May 1977.

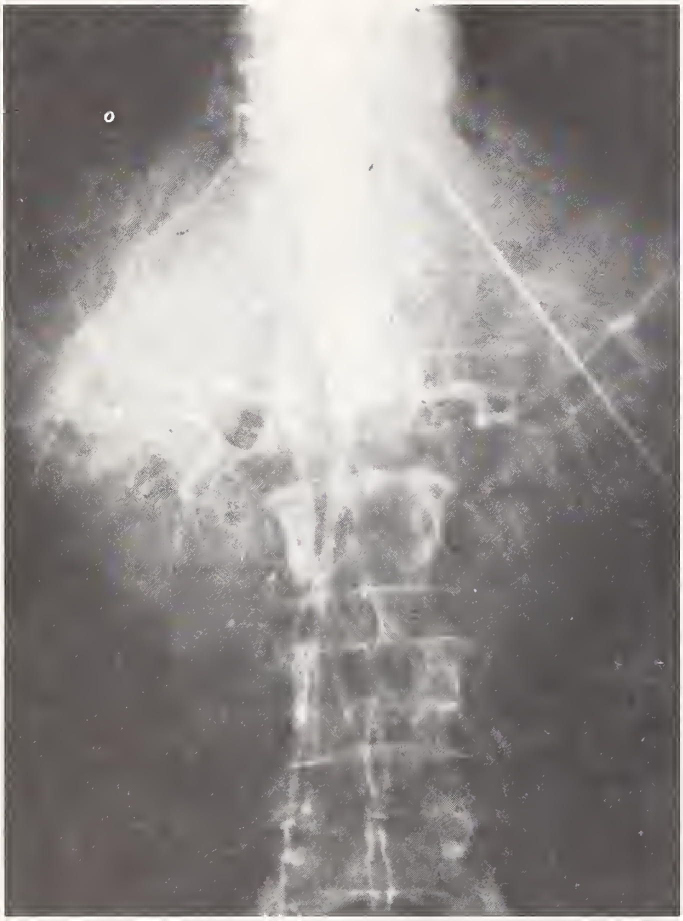

Figure 1
Anteroposterior view of preoperative arteriogram revealing complete occlusion of the abdominal aorta below the renal arteries.

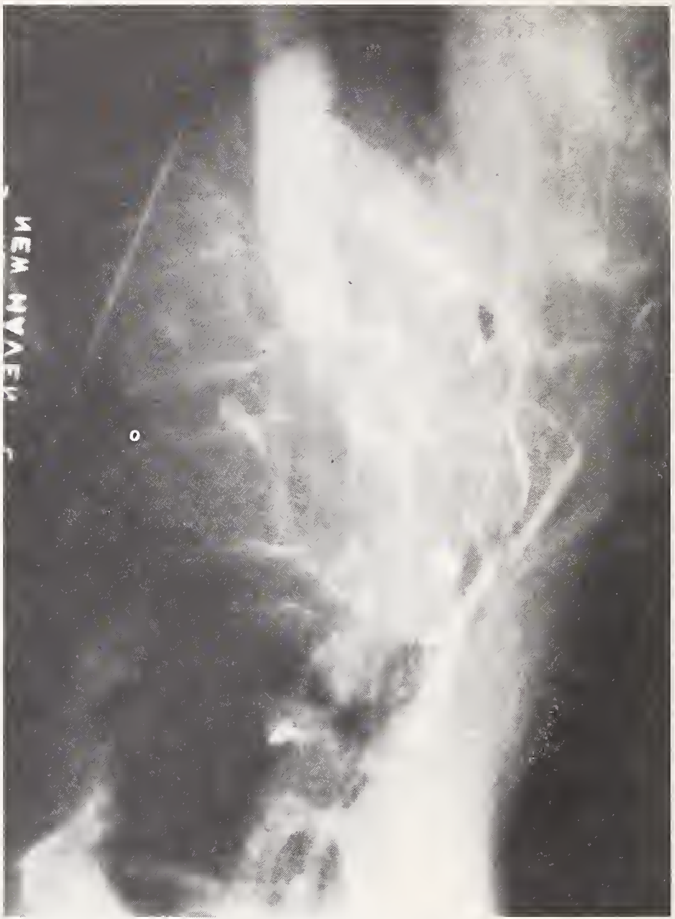

Figure 2
Lateral view of preoperative arteriogram revealing high grade stenosis of the superior mesenteric artery and the celiac axis.

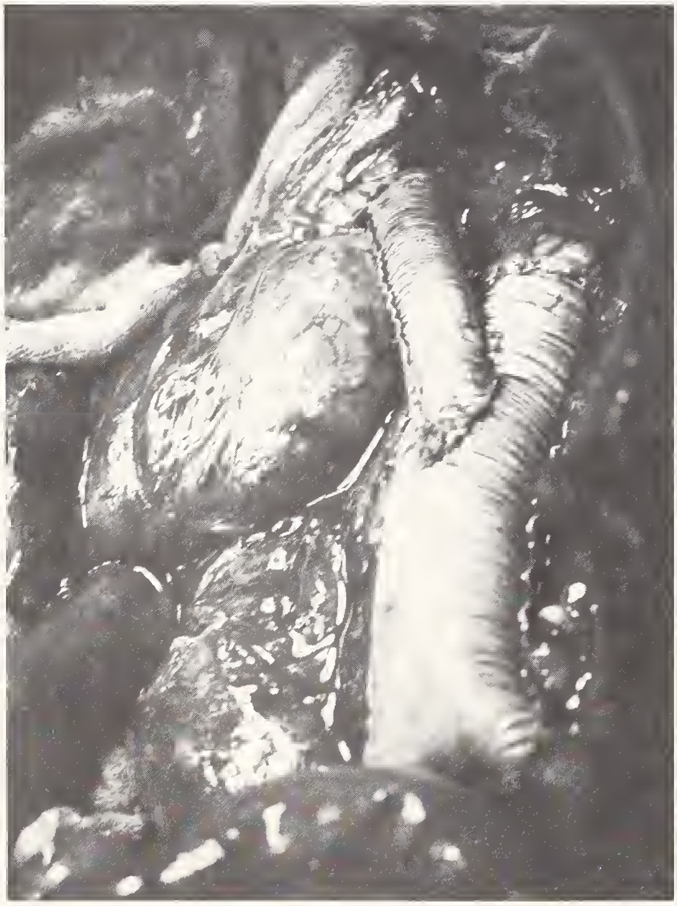

Figure 3
Aortic bifurcation graft in-situ at time of operation, illustrating side-arm of aortic graft interposed to revascularize the superior mesenteric artery.

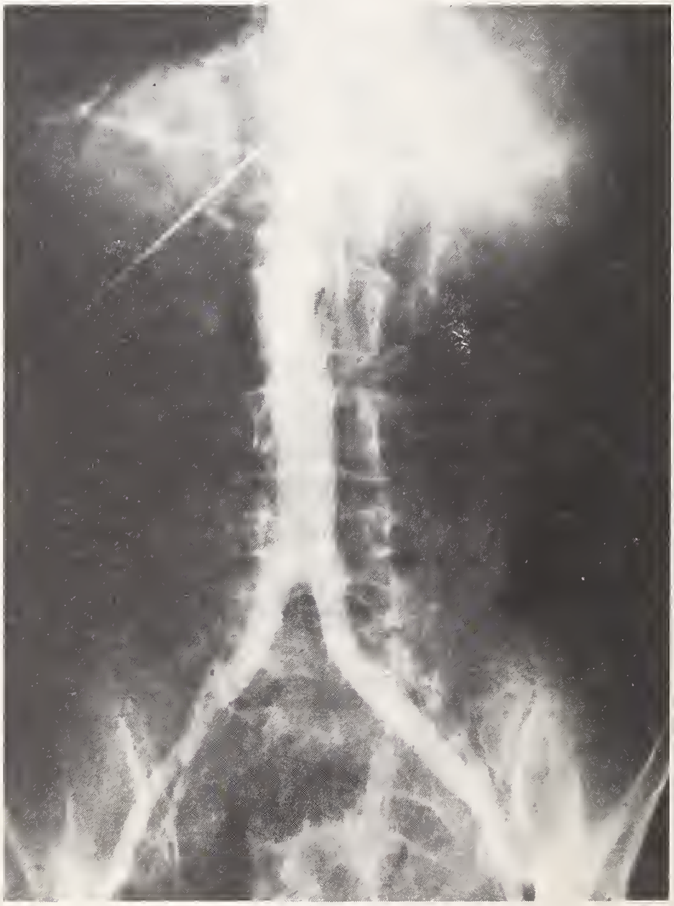

Figure 4
Anteroposterior view of postoperative arteriogram revealing patency of the bifurcation graft and visualization of the superior mesenteric artery.

constipation. Nausea and vomiting are sometimes noted. Pain and weight loss, however, are such universal features that we consider these findings essential for the diagnosis. The pain is typically postprandial, although we have had one patient who had abdominal discomfort that was unremitting. These patients develop such apprehension about meals because of the ensuing pain that weight loss is virtually inevitable.

Other symptoms of peripheral vascular disease such as claudication are common, and these problems are occasionally the initial complaint. A history of previous surgery may also be noted, since approximately 20% have previously undergone cholecystectomy without relief of symptoms. The disease seems to be more common in women, and the median age often seems young for extensive peripheral vascular disease (eg 50-60) All five patients in our personal series have been women, and none have been over 70 years old. Abnormalities of lipid metabolism should be investigated and treated on a long-term basis if they are found to exist in these patients.

Signs

Most patients are thin and appear to have lost weight. In some, cachexia may be extreme. Physical findings are usually non-specific. Carotid and abdominal bruits are common, and the pulse status often reveals occlusive peripheral vascular disease. We have noted pallor of the rectal mucosa in one patient.

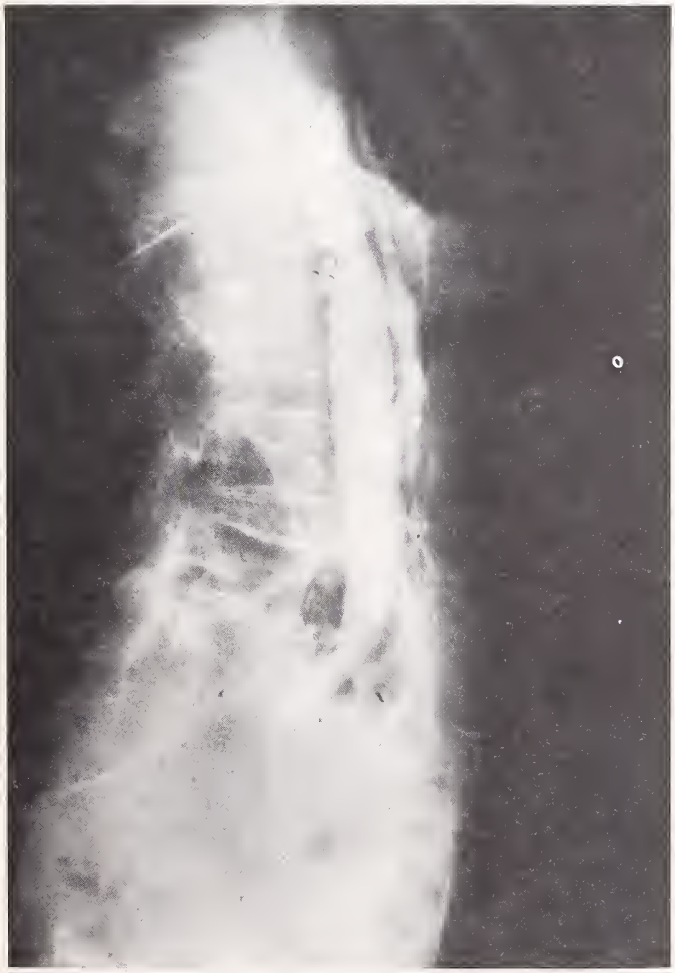

Figure 5
Lateral view of postoperative arteriogram revealing patency of the interposition graft to the superior-mesenteric artery.

Gastrointestinal Contrast Studies

Barium studies should be performed to exclude other diseases associated with abdominal pain and weight loss, such as gastrointestinal or pancreatic carcinomas. We have seen one patient who was initially admitted for evaluation of suspected carcinoma of the pancreas. A small bowel series may show a non-specific malabsorption pattern, but such findings are not diagnostic. Baum and coworkers have described indentation of the duodenal sweep by dilated collateral vessels from the celiac axis to the superior mesenteric artery.[1] Cholecystography should also be done to rule out biliary tract disease.

Laboratory Studies For Malabsorption

Deficits in the absorption of fat, carbohydrate, and protein have all been demonstrated. The functional defect is thus panmalabsorptive in scope. The most useful and reproducible studies clinically are the stool fat and the D-zylose absorption tests. A 24-hour stool fat normally should not exceed 5 grams on an 80-100 gram fat diet. Our patients have usually excreted 5 grams or more daily on a severely restricted fat diet.

Studies in experimental animals have simulated some of these findings *in vivo*, since D-zylose tolerance in animals with chronic splanchnic ischemia has been found to be abnormal.[8] In addition, *in vitro* the active transport of glucose and amino acids is reduced in isolated preparations of intestine remaining viable after an ischemic insult.[3]

Angiography

Lateral aortography is indispensable in establishing the diagnosis, and occlusion of two of the three visceral arteries is required for the diagnosis. The celiac axis may be found to provide blood by collaterals for the distribution of both the superior and inferior mesenteric arteries. Occasionally, the inferior mesenteric artery is found to supply the superior mesenteric artery. (Figure 6) In patients who do not have significant aorto-iliac disease, we have taken other approaches. Figure 7 illustrates a graft from the aorta to the superior mesenteric artery. Another approach, which we presently prefer, is illustrated in Figure 8, with a graft of autogenous saphenous vein from the iliac artery to the superior mesenteric artery. This latter approach avoids dissection and cross-clamping of the aorta.

We have not had operative deaths or significant complications in our personal experience. Larger series from the literature suggest that revascularization of the superior mesenteric artery can be carried out with a 5% mortality or less.[6] Since these patients usually have extensive vascular disease, a five year survival rate of approximately 80% may be anticipated. Approximately 90% of long-term survivors have a sustained good or excellent result. From collected cases in which intestinal absorption has been adequately documented, significant improvement in steatorrhea and D-zylose tolerance occur (Table II). Our experience indicates that this improvement in absorption is sustained for a prolonged period of time, and we have not seen catastrophic mesenteric infarctions in revascularized patients.

Conclusion

Although abdominal angina is uncommon, the guidelines for diagnosis and results of surgery have been sufficiently delineated to recommend elective revascularization for those patients who are acceptable operative risks and who meet the diagnostic criteria. It may be hoped that wider recognition and treatment of this syndrome will lead to a reduced incidence of acute mesenteric infarction with its tragic sequellae.

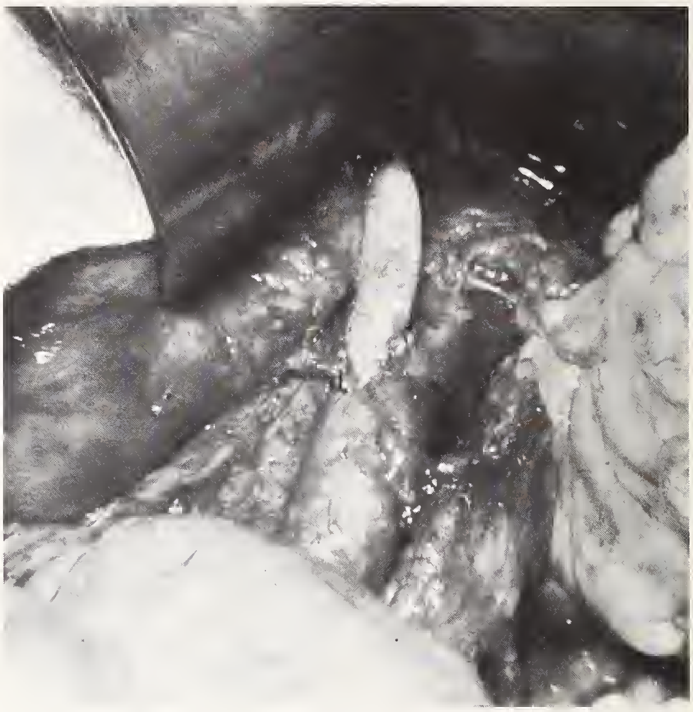

Figure 7
Operative photograph illustrating an interposition graft from the aorta to the superior mesenteric artery.

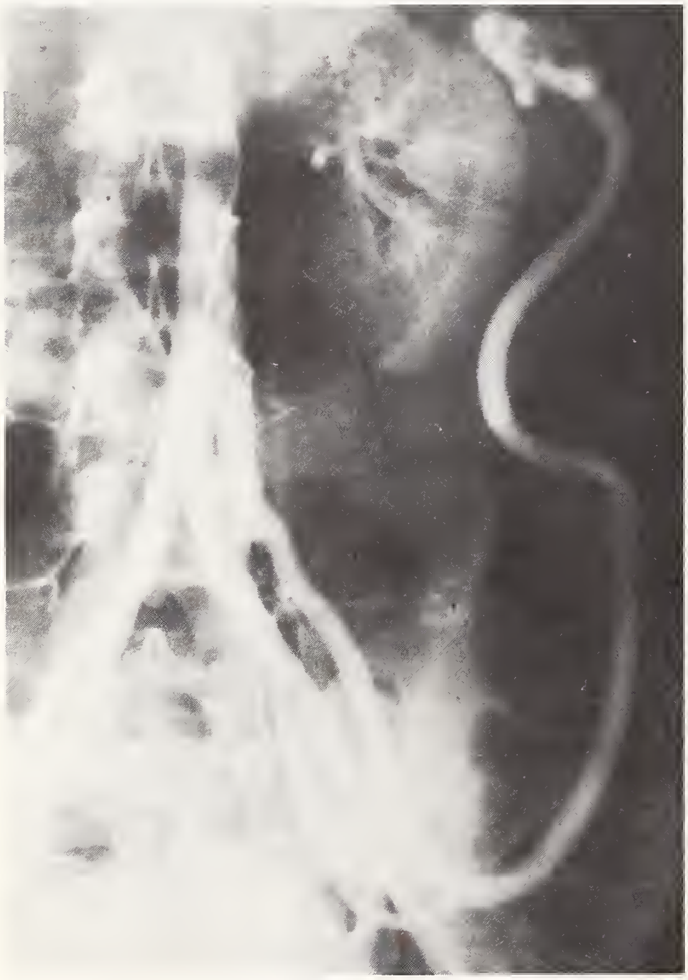

Figure 6
Arteriogram illustrating a "meandering mesenteric artery" providing blood to the superior mesenteric artery from the inferior mesenteric artery.

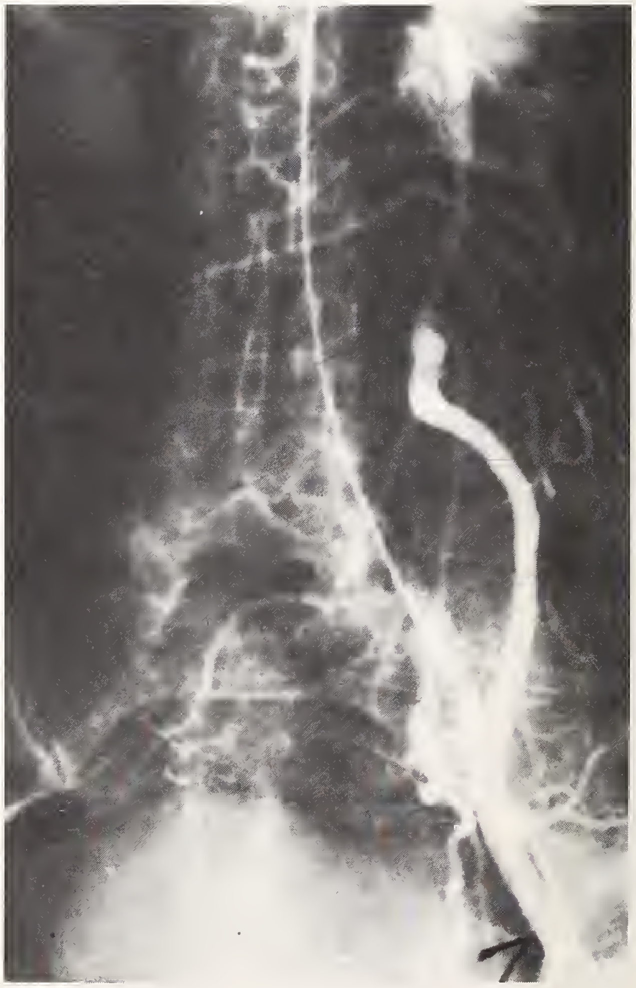

Figure 8
Arteriogram illustrating a saphenous vein bypass graft from the left iliac artery to the superior mesenteric artery.

Table II

DATA ON INTESTINAL FUNCTION AND WEIGHT LOSS FROM ELEVEN COLLECTED PATIENTS* WITH ABDOMINAL ANGINA (FIVE PERSONAL CASES AND SIX FROM THE LITERATURE)[7, 10, 11]

Weight Loss	24 ± 4 lbs.
Stool Fat	
Pre-op	9.4 ± 2.0 grams
Post-op	1.5 ± 0.3 grams
D-Zylose	
Pre-op	2.0 ± 0.5 grams
Post-op	4.8 ± 0.3 grams

*All parameters were not available in each patient, but each mean and standard error reflects observations in six or more of the collected group.

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Surgical Treatment of Renovascular Hypertension

DENTON A. COOLEY, M.D. AND DON C. WUKASCH, M.D.

ABSTRACT—Renal artery lesions appear to be the etiology for hypertension in approximately five to ten percent of the hypertensive population. This fact has stimulated increased interest in the criteria for diagnosis and surgical treatment of renovascular hypertension (RVH). Through December 31, 1976 in our institution 487 patients have undergone surgical treatment for RVH. The most common causes were arteriosclerotic occlusive lesions (73%), fibromuscular dysplasia (12%), and renal artery aneurysms (4%). Ages ranged from two to 84 years, with a mean age of 58 in males and 51 years in females. Endarterectomy and bypass techniques were employed with approximately equal frequency. Early mortality in the entire series was 7.4% which included all patients, 85% of whom underwent other concomitant vascular procedures. Resolution or significant improvement of hypertension was achieved in 81% of patients followed 1-8 years. Our experience has been that, although we recognize the usefulness of split renal function studies (SRFS) and renal venous renin assays (RVRA) in predicting favorable response of RVH to surgical therapy, these studies are not always practical. This concept is based on the difficulty in interpreting the results of these tests in patients with bilateral renal lesions and the incidence of false positive or negative SRFS and RVRA. Therefore, we believe that the presence of a renal artery lesion in a hypertensive patient, particularly if undergoing another intraabdominal vascular surgical procedure, is indication for renal artery revascularization.

The role of hypertension as a contributing cause to mortality from cardiovascular disease has focused attention upon diagnosis and treatment. While hypertension is usually controllable only by medical therapy, in many instances surgical treatment may provide a more definitive result. That obstructive lesions of the renal arteries can produce hypertension, primarily diastolic, and that surgical correction of these lesions can produce complete relief has now

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been demonstrated.[1] [2] [3] This development has stimulated increased interest in the surgical treatment of renovascular hypertension (RVH).

Development of Surgical Treatment of Renovascular Hypertension

The relationship between the kidney and elevation of blood pressure was first described in 1836 by Bright[4] and the syndrome he described is still associated with his name. However, it was not until almost 100 years later in 1926 that Callahan, et al[5] performed the first direct renal artery surgical procedures, consisting of ligation of an aneurysm of the renal artery. Shortly thereafter, in 1934, Goldblatt[6] reported his classic experimental demonstration that constriction of a renal artery produces atrophy of the involved kidney and hypertension. Remission of hypertension, resulting from pyelonephritis, by nephrectomy was reported in 1937 by Butler.[7] The initial and classic description of fibromuscular dysplasia of a renal artery was reported in 1938 by Leadbetter, et al.[8]

The first definitive explanation of the mechanism of experimental renal hypertension was proposed in 1941 by Page.[9] Page and associates[10] investigated renin, the pressor substance in the kidney and found that it required another substance, "renin activator", acting with it to produce pressor action.

In 1948, Mathé [11] first successfully resected an aneurysm of the renal artery with preservation of the involved kidney. Thromboendarterectomy of both renal arteries with relief of hypertension was first reported in 1954 by Freeman, et al.[12] Stimulated by these initial successful case reports, active interest and rapid refinement in surgical techniques developed between 1957 and 1964, and were reported by Poutasse and Dustan, DeCamp and Birchall[1], and from our own center.[3]

These early reports demonstrated that renovascular hypertension could be relieved in some selected patients. Success was not universal and the criteria for proper selection of patients awaited the development of refined diagnostic tests. Evaluation of the techniques of intravenous pyelography (IVP), renal scans, and renograms initiated attempts to determine which patients would benefit from surgical treatment.[13] However, delineation of the indications for patient selection awaited the significant development of split renal function studies in 1961 by Stamey, et al,[14] and in 1962 by Howard,[15] and the description of a positive renal venous renin assay (RVRA) in 1967 by Michelakis, Foster, et al.[16] The mechanism of the role of renin in the production of RVH had been previously proposed by Irving Page[9] at the Janeway lecture at Mt. Sinai Hospital in 1941.

In recent years, major developments in the surgical treatment of RVH have included technical contributions such as the use of autogenous saphenous vein grafts by Wylie,[17] development by Fry[18] of the technique of dilatation of the renal arteries for fibromuscular dysplasia, and the description of the "left renal lumbar vein" and its importance in facilitating exposure of the renal arteries.[19] Subsequent to the development of effective surgical techniques, the major contribution to the surgical treatment of RVH was the establishment by Dean and Foster[20] of valid criteria for the diagnosis of RVH and indications for surgical treatment. (Table 1A, B)

Table 1A

DEVELOPMENT OF SURGICAL TREATMENT OF RENOVASCULAR HYPERTENSION (RVH)

1836	Bright	Relationship between kidney and hypertension
1926	Callahan, et al	First direct renal artery operation (ligation of aneurysm)
1934	Goldblatt	Demonstrated constriction of renal artery caused atrophy of kidney and hypertension
1937	Butler	Reported remission of hypertension by nephrectomy for pyelonephritis
1938	Leadbetter, et al	Description of fibromuscular dysplasia of renal artery (5-year-old boy)
1948	Mathe'	First resection renal artery aneurysm with preservation of kidney
1954	Freeman, et al	First successful renal endarterectomy
1957 thru 1964	Poutasse & Dunstan DeCamp & Birchall Cooley & Morris, et al	Development surgical techniques for renal artery revascularization and demonstration of success of treatment

Table 1B

DEVELOPMENT OF SURGICAL TREATMENT OF RENOVASCULAR HYPERTENSION (RVH)

1961	Stamey, et al	Split renal function test (urine flow rates and PAH concentration)
1962	Howard, et al	Split renal function test (urine volume and Na and creatinine concentration)
1967	Foster, et al	Renal venous renin assay (ratio of renin activity from involved kidney to uninvolved kidney 1.5 or greater - ng/ml/hr)
1969	Wylie, et al	Use of autogenous saphenous vein grafts for renal artery bypass
1970	Fry, et al	Techniques for surgical treatment of renal artery fibromuscular dysplasia
1973	Dean & Foster	Criteria for diagnosis of RVH and indications for surgical treatment

Incidence

During our early experience with management of RVH, we thought the incidence of renovascular lesions approached 20 percent[3]; however, subsequent experience has suggested that this was an overestimate which resulted from the pre-selection of patients seen in our center. Although the exact incidence of RVH is unknown, our impression concurs with that of Foster[21] that approximately five to ten percent of persons with predominant elevation of diastolic blood pressure will have RVH.

Pathophysiology

The theory first proposed in 1940 by Page[9, 10] is still considered to be the mechanism for the production of RVH. This concept is that an obstructive lesion in a renal artery produces reduction in renal artery perfusion and/or pulse pressure which results in release of renin by the juxtaglomerular apparatus of the kidney. Renin passes into the systemic circulation via the inferior vena cava and is then converted into angiotensin which produces hypertension. Although this mechanism appears to be valid and indeed forms the basis for one of the best available diagnostic tests for RVH, some recent experimental evidence by Louis, et al[22] has questioned the validity of this mechanism.

Causes of Renovascular Hypertension

Arteriosclerotic occlusive lesions are the most common etiology for RVH and in our experience represent approximately 73 percent of cases. The occlusive process was located in the proximal segment of the renal artery in 71 percent of patients. These arteriosclerotic lesions more frequently involve the left renal artery, occur in the older group and are more common in males than females by a ratio of two to one.[13] (Figure 1)

Table 2

CAUSES OF RENOVASCULAR HYPERTENSION (RVH)

1.	Arteriosclerotic occlusive lesions	(73%)
2.	Fibromuscular dysplasia	(12%)
3.	Dissection of fibromuscular dysplasia	
4.	Renal artery aneurysms	(4%)
5.	Embolus to renal artery	
6.	Multiple renal arteries	
7.	Crossing and impingement with stenosis of two ipsilateral renal arteries	
8.	Dissecting thoraco-abdominal aneurysm	
9.	Iatrogenic dissection of normal renal artery	

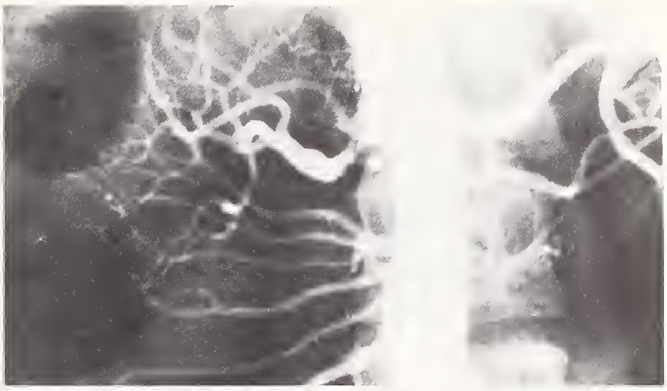

Figure 1

Preoperative arteriogram in a 66-year-old hypertensive female demonstrating a 90 percent arteriosclerotic stenosis of left renal artery. Patient was successfully treated with an autogenous saphenous vein bypass graft from the abdominal aorta to the left renal artery.

Fibromuscular dysplasia is the second most common cause of RVH and was the etiological factor in approximately 12 percent of the patients in our series. This condition for which the etiology is unknown, more frequently involves the right renal artery. The obstruction usually presents as diffuse involvement of the middle or distal renal artery, occurs more frequently in females by a ratio of nine to one, and in the younger age group with the mean age of these patients being 40 years.[13] This condition in the renal arteries is often associated with concomitant symptomatic fibromuscular dysplasia of the internal carotid arteries (Figure 2). Dissection of renal artery fibromuscular dysplasia can occur spontaneously and produce additional partial obstruction or complete occlusion of the artery (Figure 3). Revascularization of advanced fibromuscular dysplasia of the renal arteries which extends to the branch arteries may

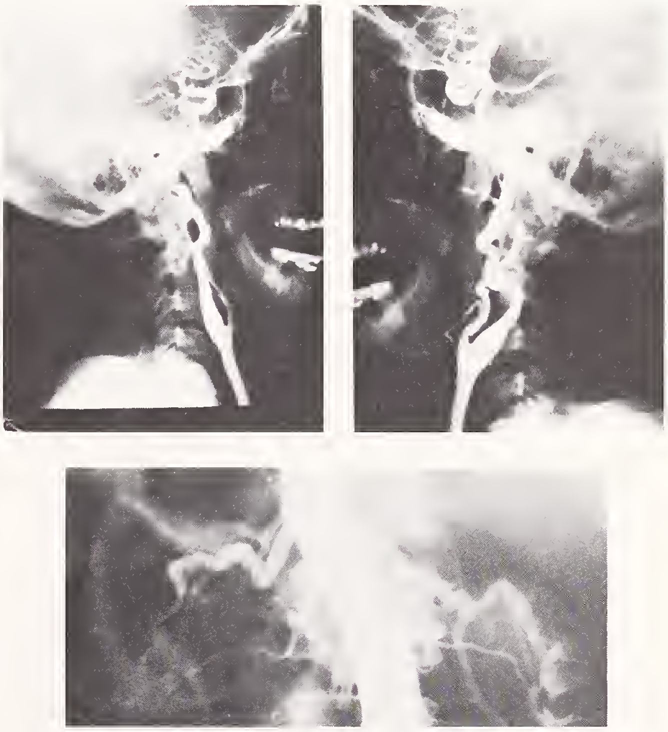

Figure 2

Preoperative arteriogram in a 46-year-old hypertensive female with symptoms of cerebrovascular insufficiency (CVI) demonstrating fibromuscular dysplasia in both renal and internal carotid arteries. Hypertension and symptoms of CVI were relieved by saphenous vein bypass grafts to both renal arteries and bilateral internal carotid artery dilatation.

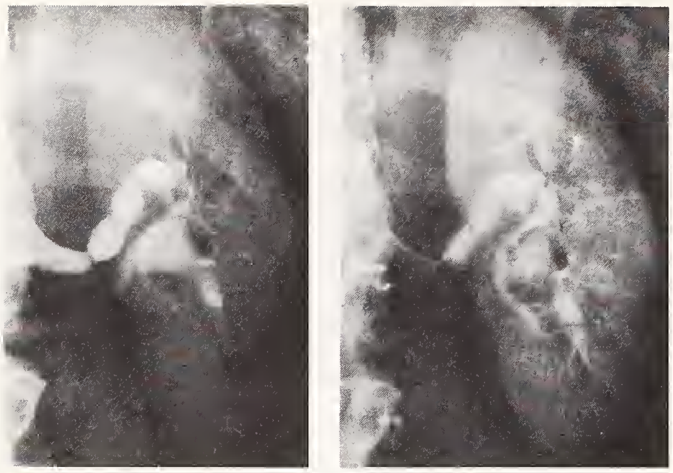

Figure 3
Preoperative arteriogram in a hypertensive 48-year-old male demonstrating dissection of fibromuscular dysplasia of the left renal artery. Successful treatment consisted of autogenous saphenous vein graft to the distal left renal vein at the hilum of the kidney with tacking down of distal intima.

present a difficult technical problem. The technique of dilatation as described by Fry[18][23] appears to offer the best solution. However, in certain cases, the technique of in vitro renal vascular reconstruction first described by Mori and associates,[24] and modified by Belzer, et al[25][26] of utilizing extracorporeal hypothermic continuous perfusion with transplantation of the kidney into the iliac fossa offers the possibility of corrective surgery for some otherwise inoperable lesions.

Renal artery aneurysms were the third most common lesions of the renal arteries producing RVH, and were seen in approximately four percent of patients. Controversy exists as to whether excision is indicated unless there is definite evidence that the aneurysm is producing hypertension. Lateralizing renal venous renin assays (RVRA) and split renal function studies (SRFS) are indicated to determine indication for operation if hypertension exists. Rupture of renal artery aneurysms have been reported, and Fry and associates[27] advise excision of all such lesions. The preferable method for excision of aneurysms in the distal renal artery appears to be transection of the renal artery and vein, extracorporeal hypothermic continuous perfusion, resection of the aneurysm and reconstruction of the renal artery using microsurgical techniques, and autotransplantation of the kidney into the iliac fossa.[24][25][28]

Emboli to the renal arteries are usually manifested by acute renal insufficiency associated with clinically apparent emboli in other major vessels. When suspected, emergency selective renal arteriography should be performed and Fogarty catheter embolectomy performed on an emergency basis.

Multiple renal arteries with or without stenotic lesions may be associated with hypertension (Figure 4). Until recently this syndrome was usually considered inoperable, but recently developed microsurgical techniques utilizing extracorporeal hypothermic continuous perfusion would appear to be applicable to these situations.[24][25][28][29]

An unusual case in our series was that of a 35-year-old female who demonstrated RVH on the basis of two left renal arteries, the inferior of which crossed the superior producing impingement, stenosis and post-stenotic dilatation (Figure 5). The patient became normotensive following autogenous saphenous vein graft to the superior renal artery distal to the stenotic area.

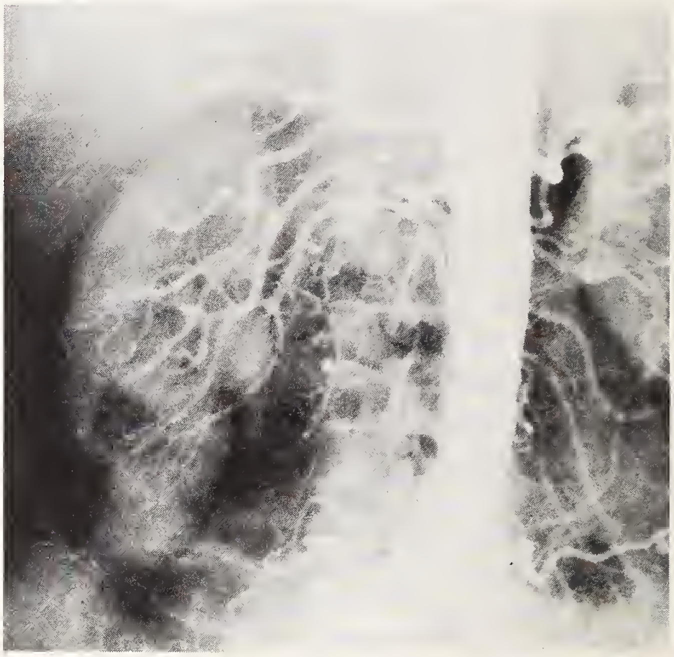

Figure 4
Arteriogram in a hypertensive 68-year-old female demonstrating multiple renal arteries bilaterally.

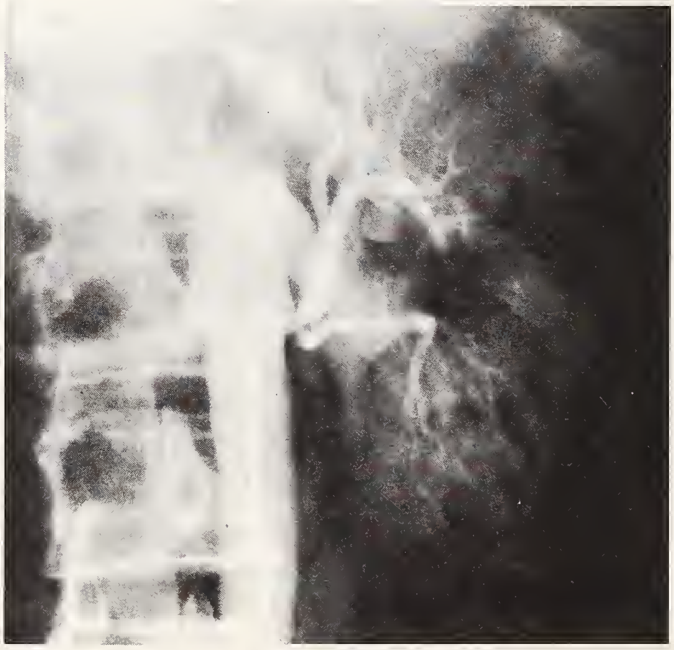

Figure 5
Preoperative arteriogram in a 35-year-old hypertensive female demonstrating two left renal arteries. The inferior artery crossed the superior producing constriction, post-stenotic dilatation and RVH. Surgical treatment was successful (see text).

Dissecting thoracoabdominal aneurysms often produce renal artery occlusion by dissection of one or both renal arteries (Figure 6). The principle of surgical treatment is resection and replacement of the descending thoracic segment of the dissected thoracic aorta, and restoration of flow through the true lumen of the abdominal aorta. Blood flow is thereby redirected into the true lumen of the renal arteries.[30]

Iatrogenic dissection of a normal renal artery can produce renal artery obstruction and subsequent RVH. Such a case in our series is demonstrated in Figure 7.

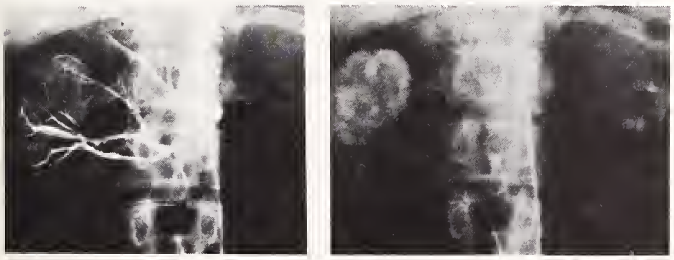

Figure 6
Aortogram in a 48-year-old male with a dissecting thoracoabdominal aneurysm demonstrating filling of the right renal artery from the false lumen and delayed filling of the left renal artery via the true lumen.

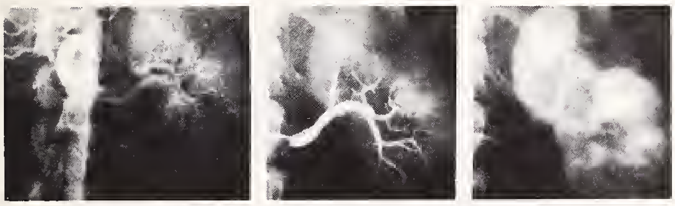

Figure 7
Selective left renal arteriogram in a 29-year-old male who had previously undergone right nephrectomy for tumor. Films demonstrate iatrogenic dissection at origin of left renal artery and infarction of upper pole of left kidney. Successful treatment was effected by tacking down dissected intima and placing vein bypass graft to left renal artery extending out primary branches.

Diagnostic Techniques and Indications for Operation

The hypertensive patient, following routine history, physical examination, and laboratory studies, is screened with rapid sequence intravenous pyelography (IVP). In our experience, IVP disclosed an abnormality in only 70 percent of documented cases of RVH.[13] False negative IVP in patients with RVH has been reported by Foster, et al[21] to be 31 percent, one-half of these in patients with bilateral renal artery stenosis.

Renal arteriography is performed in all hypertensive patients to be evaluated for RVH because of the proven inadequacy of IVP as a screening technique. Translumbar aortography provides simplicity of performance as a screening procedure. It must be recognized, however, that because of the posterior origin of the left renal artery and posterior course of the renal arteries, selective and oblique views may be necessary to visualize some lesions in the origins or distal thirds of the renal arteries. Retrograde aortography provides more precise information regarding renal arterial anatomy. Retrograde or even antegrade selective renal arteriography may not be technically feasible, and may actually be contraindicated in the frequent presence of diffuse arteriosclerotic disease in patients undergoing evaluation for RVH. Therefore, we believe that translumbar aortography will continue to be the technique of choice in evaluating most patients for RVH with diffuse aorto iliac occlusive disease.

The usefulness of split renal function tests (SRFT) and renal venous renin assays (RVRA) in predicting which hypertensive patients with renal artery lesions will respond to renal artery revascularization has been described by Dean and Foster,[20] and Buda, et al.[31] Several concepts regarding the indications for RVH have been established. First, not all patients with a renal artery lesion and hypertension have RVH and, therefore, will not respond to surgical therapy. Second, the hypertensive patient with unilateral renal artery stenosis and grossly elevated venous renin activity from the affected kidney will almost always respond to surgical therapy. Between these two well-documented concepts, problem areas exist: evaluation of patients with bilateral renal artery lesions, interpretation of false positive or negative SRFS and RVRA, and those situations in which deferring treatment to await results of RVRA is not practical for optimum patient care. Additionally, our experience indicates a high correlation between operative pressure gradients and favorable results of surgical treatment.

Recognizing the usefulness of SRFS and RVRA in predicting favorable response of hypertension to surgical therapy, we believe that these studies are not always practical, and often recommend operation in the absence of clear-cut indications based on these tests. The presence of an arteriosclerotic renal artery lesion in a hypertensive patient is valid indication for surgical treatment to prevent ultimate loss of the kidney by progression of the lesion to complete occlusion. This concept is particularly true if the patient is to undergo another intraabdominal vascular surgical procedure for abdominal aortic aneurysm or occlusive disease of the aorta, iliac, or visceral arteries.

Surgical Technique

Various surgical techniques of renal artery revascularization have been developed and described for individual renal artery lesions.[32] Adequate exposure of the renal arteries is the key aspect in obtaining optimum technical results.

Exposure: A midline abdominal incision extending from the xiphoid provides maximum exposure and allows access for any other concomitant procedures. The peritoneum overlying the aorta is incised, mobilizing the inferior mesenteric vein to the left and the duodenum to the right. The left renal vein overlies the left renal artery and is transfixed by three major branches which limit its mobilization (Figure 8). The most important of these branches is the left renal lumbar vein which has been found to be present in 95 percent of patients in our experience.[19] When this large left renal lumbar vein and the testicular and adrenal tributaries are ligated, the left renal vein may be mobilized in a cephalad direction of six to seven centimeters (Figure 9). This maneuver provides excellent exposure of both renal arteries and precludes the necessity of transecting the left renal vein.[19]

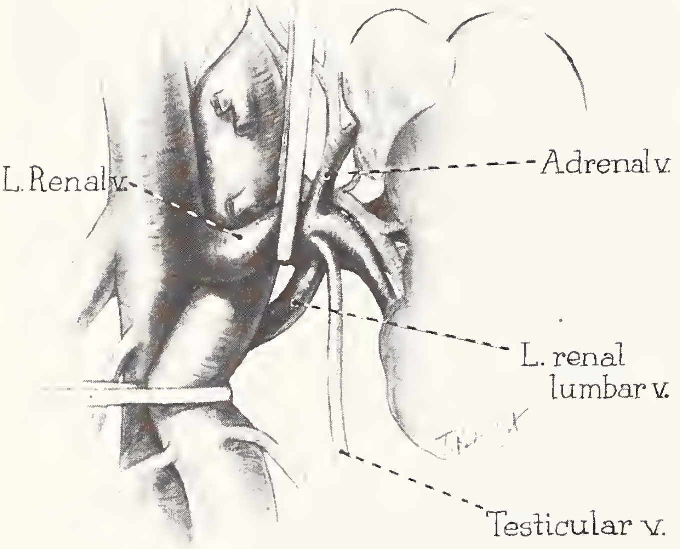

Figure 8
Drawing of branches of left renal vein demonstrating posterior location of left renal lumbar vein.

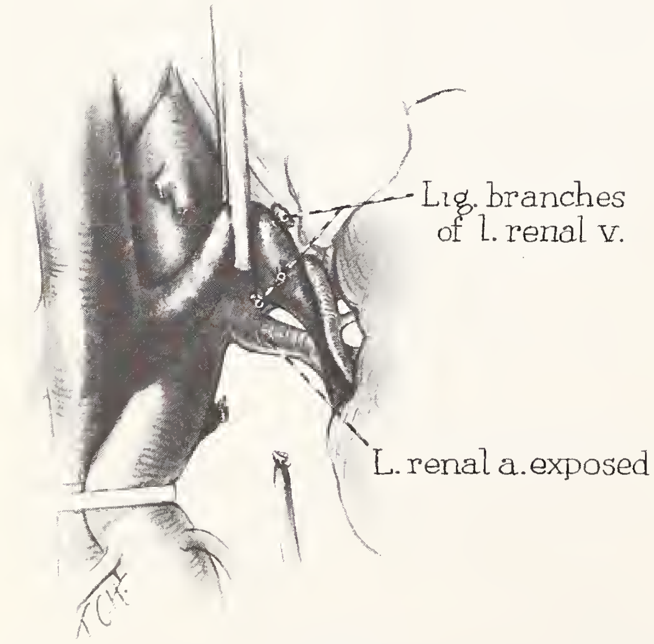

Figure 9
Drawing of transected branches of left renal vein demonstrating mobility of left renal vein obtained by maneuver.

Left Renal Artery Bypass: Following mobilization and cephalad retraction of the left renal vein as described above, the left renal artery is clamped with vascular clamps and a one to two centimeter longitudinal arteriotomy made in the artery (Figure 10 A-C). An autogenous saphenous vein graft (Figure 10-D) or a seven millimeter double velour knitted Dacron graft*[33] is tailored to match the arteriotomy (Figure 10-D). An end-to-side anastomosis is performed using running polypropylene suture if a vein graft is utilized or multifilament polyester suture if a Dacron graft is used (Figure 10 E, F). The proximal anastomosis is made by applying a partial occluding clamp to the abdominal aorta, and anastomosing the proximal end of the graft end-to-side to the aorta (Figure 10 G).

Right Renal Artery Lateral to Inferior Vena Cava (IVC): Lesions in the middle or distal thirds of the right renal artery require exposure of the artery lateral to the IVC. This is facilitated by first ligating the left renal lumbar vein as described above to obtain maximum cephalad mobilization of the left renal vein. The origin of the right renal artery is identified and the artery dissected posterior to the IVC. The

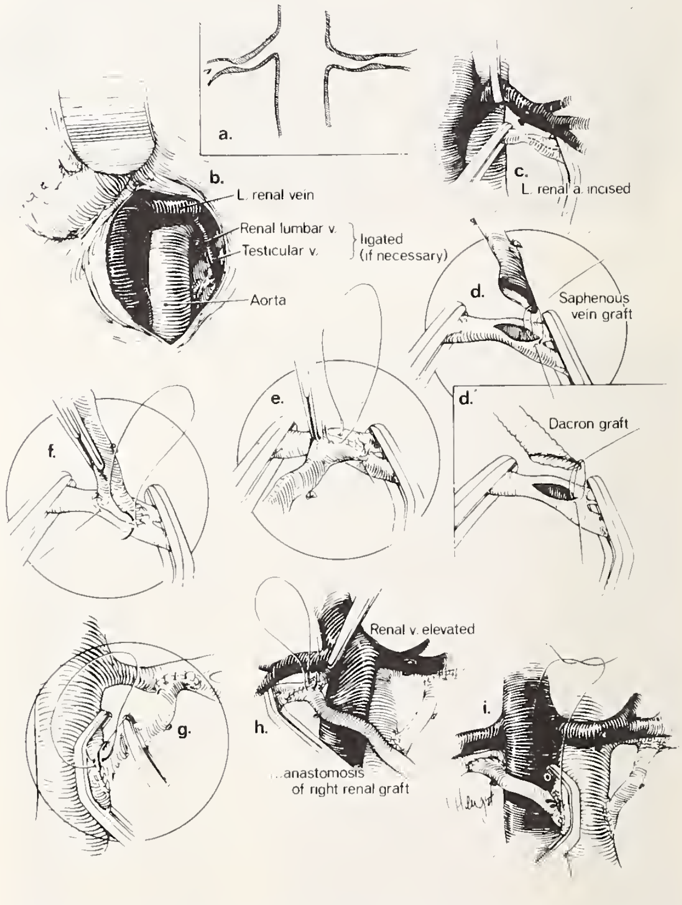

Figure 10
Drawings demonstrating various surgical techniques of renal artery bypass (see text for description).

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*Meadox-Cooley Double Velour Graft, Meadox Medicals, 6 Raritan Road, Oakland, New Jersey 07436.

IVC is mobilized and retracted to the left. The artery is dissected and the distal anastomosis made as described above (Figure 10 H). The graft is passed anterior to the IVC and anastomosed end-to-side to the abdominal aorta (Figure 10 I).

Right Renal Artery Bypass Medial to IVC: A proximal right renal artery lesion (Figure 11 A) may be bypassed medial to the IVC. In such cases the IVC is mobilized and retracted to the right (Figure 11 B). This maneuver is facilitated by mobilizing the left renal vein following ligation of its three major tributaries, the most important being the left renal lumbar vein.[19] The distal and proximal anastomoses are made as described above.

Endarterectomy and Arterioplasty: Patients with renal artery stenosis in association with aneurysms of the abdominal aorta (AAA) or aorto iliac occlusive disease (AIOD) requiring concomitant aortic graft replacement are often best treated by this technique (Figure 11 D). The proximal aorta is clamped above the renal arteries following intravenous administration of Mannitol. The aorta is transected at the level of the renal arteries and an endarterectomy performed under direct vision (Figure 11 E). A double velour knitted Dacron graft*[33] is tailored so as to form "dog ears" to extend out each renal artery (See dotted line Figure 11 E). The graft is then anastomosed end-to-end to the proximal aorta and renal arteries (Figure 11 F). The graft is clamped just distal to the anastomosis and the proximal aortic clamp released to provide renal perfusion during construction of the distal graft anastomosis.

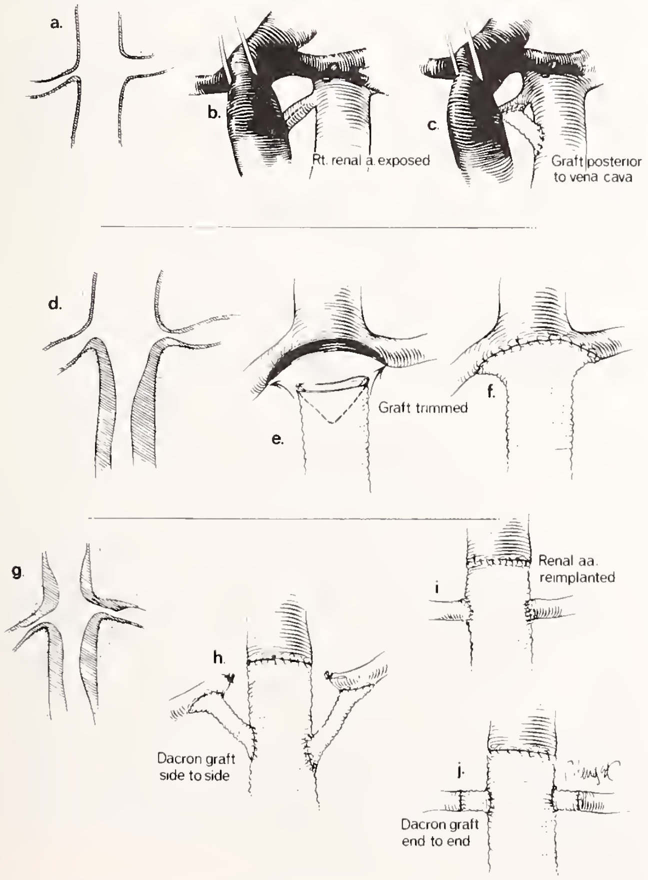

Figure 11
Drawings demonstrating various surgical techniques of renal artery bypass, endarterectomy, and reimplantation (see text for description).

Reimplantation of Renal Arteries: Patients demonstrating AAA or AIOD which involve or extend above the renal arteries require detachment of the renal arteries and reimplantation with or without extension of the renal arteries with side grafts (Figure 11 G). Adequate exposure of the aorta proximal to the renal arteries is facilitated by clamping the proximal aorta at the level of the diaphragm at the supraceliac bare area.[34] The renal arteries are then transected and reanastomosed into the aortic graft by one of the techniques shown in Figure 11 H-J.

In all the procedures described above, Heparin (2 mg/kg body weight) is administered prior to occlusion of the renal arteries or aorta, and reversed with Protamine sulfate (ratio 1.5 mgm Protamine to 1.0 mgm Heparin) following restoration of flow.

Clinical Material

During an eight-year period through December 31, 1976, in our institution 487 patients have undergone surgical treatment for RVH. Ages ranged from two years to 84 years with a mean age of 55 years. Mean age at time of operation was 58 years in males, and 51 years in female patients (Table 3).

The procedures utilized are shown in Table 4, which demonstrates that endarterectomy and bypass techniques were applied in approximately equal frequency.

Table 3
SURGICAL TREATMENT RENOVASCULAR HYPERTENSION
AGE AND SEX DISTRIBUTION

Age - yrs.	Male	Female	Total
1-4	2	1	3
5-9	1	2	3
10-19	9	8	17
20-29	2	9	11
30-39	9	27	36
40-49	33	37	70
50-59	84	54	128
60-69	109	62	171
70-79	28	7	35
80-84	2	1	3
Total	279	208	487
Mean age	58	51	55

Youngest patient - 2 years
Oldest patient - 84 years

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*Meadox-Cooley Double Velour Graft, Meadox Medicals.

Early mortality among the entire series was 7.4 percent, with no significant difference between patients undergoing endarterectomy with patch (5.4 percent) as compared to those undergoing bypass procedures (7.6 percent). A significantly higher early mortality (17.2 percent) was observed among those patients requiring reimplantation techniques (Table 5). Late mortality in the entire series has been 15 percent (Table 6). A significant reduction in blood pressure was obtained in 40 percent of patients and 41 percent of patients remained completely normotensive during the follow-up period of one to eight years. Thus 81 percent of patients obtained a salutary response to renal artery reconstruction (Table 7).

Table 4

SURGICAL TREATMENT RENOVASCULAR HYPERTENSION
TOTAL EXPERIENCE THROUGH DECEMBER 31, 1976

Procedure	No. Patients	Percentage
Endarterectomy & Patch	165	34
Endarterectomy alone	40	8
Patch angioplasty alone	12	3
Bypass graft	157	32
Reimplantation	29	6
Other Procedures (aneurysm, embolectomy, dilatation, freeing of adhesions, etc.)	39	8
Nephrectomy	45	9
Total	487	100

Table 5

SURGICAL TREATMENT RENOVASCULAR HYPERTENSION
EARLY MORTALITY*
(thru December 31, 1976)

Procedure	No. Patients	Early Deaths	Percentage
Endarterectomy with Patch	165	9	5.4
Endarterectomy alone	40	5	12.5
Patch angioplasty alone	12	0	0.0
Bypass graft	157	12	7.6
Reimplantation	29	5	17.2
Other procedures (aneurysm, embolectomy, dilatation, freeing of adhesions, etc.)	39	0	0.0
Nephrectomy	45	5	11.1
Total	487	36	7.4

*Includes all patients, 85% of whom underwent concomitant other vascular procedures.

Table 6

SURGICAL TREATMENT RENOVASCULAR HYPERTENSION
LATE MORTALITY
(through December 31, 1976)

Procedure	No. Patients	Late Deaths	Percentage
Endarterectomy with Patch	165	22	13.3
Endarterectomy alone	40	9	22.5
Patch angioplasty alone	12	1	8.3
Bypass graft	157	18	11.5
Reimplantation	29	5	17.2
Other procedures (aneurysm, embolectomy, dilatation, freeing of adhesions, etc.)	39	7	18.0
Nephrectomy	45	11	24.4
Total	487	73	15.0

Table 7

SURGICAL TREATMENT RENOVASCULAR HYPERTENSION
LONG-TERM RESULTS ONE TO EIGHT YEARS

Significant reduction blood pressure	40%
Completely normotensive	41%
Total improved or normotensive	81%

Discussion

Recent controversy in the field of RVH has focused on determination of the criteria for the interpretation of the results of split renal function studies (SRFS) and renal venous renin assays (RVRA). Dean and Foster[20] have presented well-documented data that the classic criteria for interpretation of the Howard and Stamey tests are too rigid and should be liberalized. They are also of the opinion that liberalization of the criteria for interpretation of RVRA also seems indicated but is less well-documented.[20] Also of significance appears to be that Dean and Foster's[20] concept that SRFS and RVRA are complementary and that both should be employed because omission of either test would have resulted in false negative results in eight to ten percent of their cases.

Our experience has been that, although we recognize the usefulness of SRFS and RVRA in predicting favorable response of RVH to surgical therapy, these studies are not always practical. This concept is based on the difficulty in interpreting the results of these tests in patients with bilateral renal SRFS and RVRA. Therefore, we believe that the presence of a renal artery lesion in a hypertensive patient, particularly if undergoing another intraabdominal vascular surgical procedure, is indication for renal artery revascularization.

The higher early mortality (7.4 percent) and lower incidence of relief or improvement of hypertension (81 percent) than in some other reported series[21] appears to be based on difference in patient population. Approximately 85 percent of patients in our series operated upon for renal artery stenosis also underwent concomitant procedures for other vascular lesions such as AAA, AIOD or visceral artery occlusive disease.

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The Goals in Rehabilitation for the Peripheral Vascular Surgeon

MORRIS D. KERSTEIN, M.D.

ABSTRACT—The goal of the patient with peripheral vascular disease and the physicians responsible for his care is independent ambulation. All too often the surgeon focuses only on the successful "fem-pop" or "aorto-iliac" procedure rather than the patient. Should the procedure not be successful, both patient and doctor often tend to reject each other and rehabilitation is delayed. Therefore, the initial exchange between patient and physician should be goal directed not operation directed.

It is the purpose of the author to emphasize two aspects of the rehabilitation process—the psychosocial and the physiologic.

Since some 30-50% of patients with peripheral vascular disease have either extra cranio-vascular or cardiovascular pathology the patient should be cared for and evaluated by a team concept. The team should at least include a cardiologist, a representative of rehabilitation medicine and the surgeon. One individual is still the primary physician—he, in fact, may be none of the above.

Rehabilitation in the physiologic sense is based on the effect of physical exercise on the healthy individual. Table one[1] summarized the numerous parameters of physiologic function that are affected. Though the rationale has not been absolutely justified cardiac rehabilitation programs are increasingly seen[2]. The inference has been made that physical training may reduce the risk of or protect against the complications of arteriosclerosis. Several epidemiologic studies[10] [11] [12] and a few short term prospective studies[13] suggest that physically active subjects suffer fewer complications of arteriosclerosis. There are a number of components to establishing such a program: (1) staff position and roles (2) equipment and space needs (3) a designed exercise program (4) feedback in guidance for patients (5) methods of evaluation (6) involvement of community agencies. Finally, the program is not directed just at the postoperative patient—but rather at the individual who first is seen for claudication. He, in addition, to his postoperative colleagues and families will be incorporated in this training-evaluation-rehabilitation program.

Because the concept of active rehabilitation for the vascular patient is new, an integral facet of any program will be the research projects. Among the research projects (randomized-controlled studies) one could objectively evaluate: pharmaceuticals (e.g. vasodilators, longevity of grafts, longevity of legs following the graft, exercise tolerance on the treadmill or bicycle ergometer, oxygen consumption.

Staffing requirements include: an exercise physiologist at the Ph.D level, a technician skilled in peripheral vascular and EKG monitoring, the availability of a counseling psychologist, possibly a vocational counselor, and a therapist (corrective, recreation, physical, occupational). The entire unit can be supervised by a nurse clinician who relates back to the various or specific peripheral vascular surgeons. It is the nurse clinician who will actively be involved in assessing, planning, evaluating and coordinating patient care. She will be a primary care provider throughout the patient's disease continuum. The psychologist will provide psychotherapeutic intervention when needed to treat for anxiety or depression, and act as a resource person for behavior modification techniques. He should be available for

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Table I

GENERAL EFFECTS OF EXERCISE TRAINING ON THE HEALTHY INDIVIDUAL

- On the heart
  - Lower heart rate at each level of exercise
  - Increase in diastolic volume
  - Increase in stroke volume
  - Lower cardiac output at each level of exercise
  - Increase in velocity of myocardial contraction
  - Increase in collateral circulation of the heart
  - Little change in maximum cardiac output
  - No effect on maximum heart rate
  - Increase in mechanical efficiency of the myocardium
  - Less coronary blood flow required at equal work intensity

- On circulation
  - Decrease in total peripheral resistance
  - Change in blood flow distribution

- On the buffer capacity
  - Increase in total hemoglobin
  - Increase in blood volume
  - Increase in alkali reserve
  - Increase in capacity to accumulate lactic acid

- On the muscle
  - Increase in mechanical efficiency
  - Increase in capillarization
  - Increase in muscle fiber size
  - Increase in mitochondrial enzymatic activity

- On heat elimination
  - Facilitation of sweat production

- On circulation-respiration adaptation
  - Increase in work of breathing efficiency
  - Optimization of ventilation-perfusion

- On recovery processes
  - Decrease in recovery time of various physiological processes

- On the central nervous system
  - Relaxation
  - Change in autonomic nervous system balance

- On metabolism and endocrine system
  - Not yet well defined, but unquestionable

group work with the patient and/or family member. The vocational counselor will assist in career planning, job placement and re-training. The corrective therapist will carry out prescribed physical exercise routines and activities from all stages of the patient's rehabilitation program. The recreation therapist will evaluate the patient's leisure attitudes and involvements in relation to post-revasculization capacities. The occupational therapist will assess the patient's abilities related to ambulation, work, recreational activities and be concerned about the patient's consumption of oxygen during activity. The physical therapist will develop and implement exercise programs prescribed by the physiatrist and provide pulmonary physical therapy when indicated. A social worker will engage in ego supportive case work, crises intervention. He will be a liaison and advocate of the patient's interfacing with the hospital and community. He will support the collaborative and educational roles of the vascular team.

Equipment would include some type of Doppler flow wave monitor, treadmill—or pulse volume recorder. There should be available a resuscitation—defibillation unit, blood gas analyzer facilities for phono or ECHO evaluation and EKG monitoring equipment—strip chart. Consideration should be directed towards ultrasound visualization of the arterial lumen using a pulsed Doppler held in a mechanical arm for two plane scanning. The same area would contain facilities for plethysmography (ocular and impedance) and an electromagnetic flowmeter.

Additional materials should include a blackboard, and visual cassette tapes for self education in vascular disease. The location of the facility should be in the physical medicine area.

The exercise program should begin when the surgeon feels the wounds are sealed not healed and ambulation is safe. The patient should have been introduced to the concept pre-operatively, in the course of his disease and therefore—no special readjustment is necessary. Initial activities should include relaxation exercise, tonic activity and some range of motion. Progressive ambulation and activities of daily living should then be instituted. Treadmills and exercycles should be used under direction, periodically, to assess *objectively*, exercise tolerance and as a guide to progressive increase in exercise activity. Ankle blood pressures and pulse wave forms should be used to assess the (a) duration of exercise (b) value of pharmaceuticals (c) consideration for additional surgery (e.g. sympathectomy or femoral popliteal bypass after aorto-iliac reconstruction). Oxygen consumption should be monitored at intervals. It should be obvious that simultaneous cardiac evaluation should be taking place, and cardiovascular rehabilitation is a single concept.

For effective feedback and guidance to the patient: (a) The staff should focus on the positive signs of progress in order to relieve the patient's anxiety and to reinforce and improve self-image. (b) The patient and the patient's family should be kept informed of the team's consensus and should be included in decision making when indicated. (c) The objective demonstration to the patient that he can perform certain levels of activity without symptoms or objective findings of cardiac dysfunction should be reassuring to the patient. (d) The goal of rehabilitation should be to return the patient to purposeful activity as soon as possible, either to the former vocation or to a new vocation which may or may not require retraining or to gratifying use of enforced leisure if residual physical incapacitation prevents return to work.

Treatment should include: exercise therapy: therapy of hypertension, antiarrhythmia therapy, antianginal drug therapy, diet modification therapy of hyperlipidemia, cessation of smoking, management of diabetes-melitus, reduction to ideal body weight management of other medical problems, psychosocial adjustment, vocational planning assistance, family counseling.

Evaluation includes treadmill or bicycle ergometer stress testing with continuous mandatory electrocardiographic and ankle monitoring. Pressure evaluation also should include echo, radionucleotide and electromagnetic monitoring. Repeat arteriography should be performed when clinically indicated. An exercise stress test should be performed prior to discharge of all patients.

The specialists in home care should include a nurse, a dietician, a social worker and a rehabilitation medicine service representative. The home care team will provide home assessment planning, environmental modification when feasible and continuity of care. Any community agency or resource that might contribute to the patient's rehabilitation should be utilized by the team.

Some specific comments are directed towards the exercise program. Before entering into the proposed testing-evaluation-therapy program it is evident each patient must be totally and completely evaluated by his primary physician including history, physical and laboratory data. The initial visit to the vascular laboratory is for orientation and a hemodynamic profile to be used as a baseline. The starting level of exercise therapy was approximately 70% of the maximum working capacity if the indivdual is less than 60-65 years old. The baseline is obtained with a bicycle ergometer or the treadmill. The following protocol may be of value as a guideline[8]. Following a warm-up period of five minutes of walking at 1 mph at 2% grade, the work load will be increased every three minutes without intervening rest periods as follows: (1) walking at 1.7 mph at 10% grade (2) walking at 2.5 mph at 12% grade (3) walking or jogging at 3.5 mph at 14% grade (4) jogging or running at 4.2 mph at 16% grade. If a bicycle ergometer is used, the work load should be increased by 25 watts every three minutes. This procedure continues at thrice weekly intervals. Limiting factors are leg pain and cardiac dysfunction.

The initial test period should be for 5 minute intervals increasing to 20 minutes. It may take nearly six months, to achieve maximum work capacity. Heart rate and a one lead electrocardiogram are advised as a continuous monitoring device. Assessment of such reconditioning exercise programs were completed by estimating (1) maximum work capacity (2) changes in pulse wave form (3) ankle blood pressures (4) and oxygen consumption (5) muscle pH.

Because of the chronic nature of peripheral vascular disease, psychosocial conflicts have time to play a role in its stabilization and progression. Patients often find themselves in ambiguous positions regarding their role expectations, often because patient compliance with treatment regimens contribute to their recovery (e.g. taking medications, no smoking). It has long been believed there is an interplay of the psychological and physiologic components in the development and course of illness. Historically, there are three concepts: (1) stress producing physiologic change or stress sensitizing the patient to a physiologic disturbance (2) playing a sick role or (3) the family regulating the patient's response to stress and his compliance with treatment regimens.

In 1974 Lipowski[14] stated all diseases are multifactorial in origin with physical factors affecting psychological and societal reactions and vice versa. Psychological factors can influence the course of disease process without necessarily laying any claim to etiological primacy. The next logical extension is the role of stress. Numerous laboratory studies have demonstrated that anxious or threatening stimuli generate physiological reactions in persons which are mediated by the autonomic nervous system.[15] Therefore, it is reasonable to expect a relationship between illness, stress and events occurring in one's life. One should not be tempted to suggest either the illness or life events leads to an emotional breakdown or the reverse—that the emotional problems cause physical illness. There is, most probably, a balance of interaction. Changes in personal habits can affect key physiologic reaction in persons already susceptible to a progression in certain illness (e.g. too much alcohol, smoking, improper diet).[16]

Kasl and Cobb[17] and Stoeckle et al[18] are among those who have found the notion of illness behavior compelling. They have suggested that crisis and stressful events in a person's life may reveal more about the decision to consult a physician than about the development of the disease.

It has been suggested that the feelings of fatigue and depression accompanying an acute infection became merged with psychosocial problems in the patient's life. The patient interprets these feelings as evidence that he is still physically ill rather than as evidence that he has a psychosocial problem in his life.[19] This phenomenon has been described by Kennedy[20] as malingering or hysteria, but Bursten[21] as the obligation to remain sick, by Ruesch[22] as invalidism, by Wright[23] as secondary gain, and by Brown[24] as failure to relinquish the sick role.

It should be evident that the patient with peripheral vascular disease is a complicated individual with problems, often, more far reaching than the nonhealing ulcer on his foot or the progressive claudication in spite of "successful surgery."

Many investigators have focused upon the patient attitude towards non-cooperation in his treatment. Compliance from the perspective of patient and physician, may in fact be dramatically opposite, especially if remaining disabled means social security or disability payments for his family.[20] The resistance that people show towards role obligations regarding employment, specifically, has been found to be related to very general demographic and social factors such as low educational and occupational level, older age, minority group membership and marital status [25].

It can probably be stated that in the patient with vascular insufficiency, recently activated psychosocial conflicts, will results in a poorer recovery. Either individual or group therapy with a psychologist, psychiatrist or appropriately trained social worker is mandate to achieve the physiologic goals of the primary physician.

In a hospital (e.g. V.A.) where patients remain for prolonged periods, rather than being transferred from the acute hospital to home soon after surgery, an alternative approach may be considered.

Patients with similar disorders should be grouped together in the hospital and consideration given for a group meeting if necessary, outside or inside the hospital environment. As long ago as 1900 in Boston[26] group support for patients with chronic illness has been a part of medical folklore. It is still mostly under utilized in the hospital setting. The group of patients with vascular disease either pre-reconstruction, post-reconstruction or pre- or post-amputation for vascular disease can have a positive impact on each other with the proper group leadership and input from physiotherapy, social service and the physician. Demographically, most of the patients are in their sixties, many are diabetics, many have multiple health problems. More often than not their occupational and family lives have been disrupted because of prolonged or repeated operations and hospitalizations. Many patients can no longer afford their medical care.

When groups first start, the meetings are often trying experiences. Patient attendance is a result of coaxing by the nurse, physician or physiotherapist. The atmosphere relaxes as time and relationships progress. There is no relationship to formal psychotherapy, nor should there be. However, a skilled psychologist or psychiatrist should be present, to prevent misdirected conflicts. The emphasis should be on shared experiences with one patient teaching another. The periodic attendance of a vascular surgeon, prosthetist and corrective therapist may resolve many questions.

Examination of this informal group reveals a number of facets of need and care. The group is usually supportive. The emphasis is on dealing with the problem, reinforcing personal strengths. Discussion relates to 'how I do it.' Subjects include preventing trauma to the graft or stump, preventing infection, how to get around, medications, living with an amputation. Probably the most important subject is dealing with bureaucracies and financial support.

Individual members caution each other against dependency, fatalism and passivity. Often the patients successfully practice denial 'I don't know what's ahead.' They can see that vascular disease is progressive; and, they must be adaptive. Anger about their disease is often expressed towards the hospital administrator, hospital personnel or professionals. Since they are a group apart often (the amputee), easily identifiable, and sharing many of the same hospital experiences (surgical fears, therapist, social worker, angiographer)—their energies can be channeled by fellow patients with whom they can relate.

The purpose of this manuscript has been to hopefully enlighten the physician caring for the patient with peripheral vascular disease to recognize the needs of the total patient—psychological and physiologic. Though constraints of "time" or personal reservation may not allow the total physician concept in the delivery of health care, help is readily available through hospital and community resources. These resources should be identified early in the patient's course to achieve the ambulator not a successful "fem-pop."

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A Flexible Plan for Preventing Pulmonary Embolism

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ABSTRACT—No one plan for prevention of thromboembolism suits every patient. Several alternatives to drug prophylaxis can be considered. Estimation of the risk of thromboembolism is possible and the risk of bleeding complications may be calculated. Considering both, a flexible plan for prevention can be suited to any hospitalized patient. It is no longer excusable to neglect prevention for those who do not fit a single preferred regimen.

Ultimately, prevention of fatal pulmonary embolism may be possible using one universally effective drug, free of hemorrhagic side effects. Today, this ideal has not been achieved and one is challenged by the variety of preventive measures which have been proposed—some of which are already clearly established. Alternative to drug prophylaxis, for some patients, physical measures are possible, or prospective monitoring with minimally "invasive" techniques, withholding drug treatment unless clinically significant venous thrombosis is revealed. A practical selection can be made for any given patient from among the options, taking account of the risk of thrombosis and the risk of bleeding. Any physician, busy with the care of adult patients in the hospital, must select the option wisely, and is obliged to do so for several reasons. Effective measures are available. Bleeding can often be anticipated and usually avoided. It is possible to suit some plan of prevention to any patient at risk. Perhaps this is not generally realized. Either one plan is applied to all or the problem is not dealt with. Hopefully, commitment to prophylaxis will quickly increase when the flexibility of the alternatives is better understood. A practical analysis of the problem and some suggestions are attempted below.

Scope of the Problem

The absolute prevalence of fatal embolism has been estimated variously, depending on the source of the data, and extrapolated to the population of all hospitalized patients. Perhaps less reliably, other data have been used to calculate the magnitude of the

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problem within chronic disease institutions and nursing homes. Recently, an estimate of 189,000 fatalities in the USA annually was made.[1] Higher figures are cited to increase awareness of the problem and the need for prevention.

The problem is perceived differently, however, by epidemiologists than it is by individual practitioners. Fatal embolism is usually a "secondary diagnosis"—not being the reason for hospital admission, and is definitely uncommon in the practice of the average physician. For him, the risk of any given patient dying for this reason seems finely balanced against the risk of provoking hemorrhage among the large numbers of patients who would have to be treated because they are at risk. Hemorrhage, adding enormously to the cost of hospitalization is a direct consequence of drug prophylaxis; somehow successful prevention is unmeasurable, indirect and requires an act of faith.

The rising incidence of fatal embolism is even more persuasive to the epidemiologist. Ironically, it continues in spite of the proliferation of treatment regimens proposed. Perhaps none have been applied broadly enough to reverse the trend. But why is the incidence rising? An absolute increase appears in autopsy records from institutions keeping such data uniformly over a period of time[2]. The population is aging, and if hospitalized, old patients are at higher risk than young patients. Inaccurate reporting, based on unconfirmed suspicion may be on the increase as everyone's "index of suspicion" is continuously elevated, while at the same time, autopsy percentages are progressively declining. In any event, it is clear that more accurate reporting and broader application of properly selected prophylaxis, together, will be required before a reversal of the trend of rising incidence will appear.

Few reports of effective prevention of fatal embolism include control subjects. More reports are found which show that venous thrombosis can be prevented. Logically, a program effective for prevention of thrombosis should prevent embolism, in direct consequence. Both types of investigation are not equally persuasive. Fatal embolism is the most persuasive end-point criterion, but the requirement of an untreated control group is hard to justify ethically and it is impossible to repeat such work. Studies based on the end-point criterion venous thrombosis are ethically acceptable in regard to the requirement for untreated or placebo-treated control subjects. Since venous thrombosis is only slightly removed from embolism, this type of report is almost as persuasive but more important to the practitioner is the method by which venous thrombosis is revealed. Thrombosis is more readily understood if revealed by contrast phlebography than by less invasive techniques, which are actually better for screening—e.g. plethysmography and isotope leg scanning. Good trial design is essential, but we are often less critical of inadequate research protocols than we should be, perhaps too-trusting that journal editors will monitor such details as whether the control group was studied concurrently with the experimental group. The principal effective prophylactic drug options will be considered in mere outline before the risk of thrombosis for a given patient is characterized, the risk of bleeding defined and finally alternatives to drug prevention proposed. A flexible plan which can be adapted to individual patients is the purpose of this analysis, which can hardly do justice to the many contributions recently made to the medical literature. So much serious research is currently devoted to this problem that the conclusions below will need later modification, without doubt.

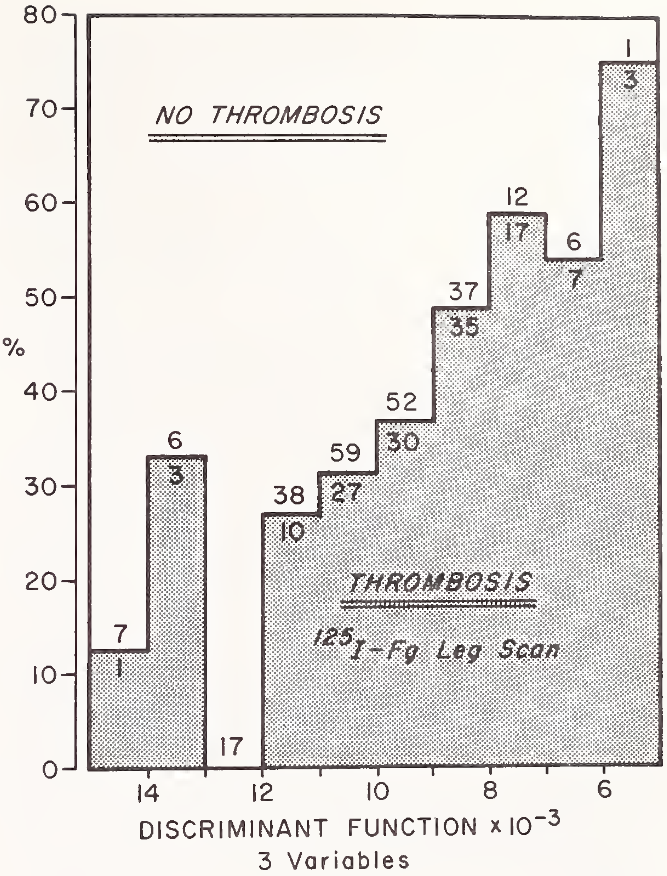


Figure 1

Distribution of 368 patients undergoing hip replacement according to discriminant analysis of three variables: age, obesity (ponderal index) and preoperative crippling (required crutches, cane or no support.) Those who postoperatively incurred venous thrombosis (125 I-fibrinogen leg scan positive) are separated from those who did not and are arranged in 10 groups, the actual number of patients in each group being given below or above a line which indicates that the risk of thrombosis varies from approximately 10% to 75% (ordinate) depending on their ranking along the discriminant function scale (abscissa.)

Effective Drug Prophylaxis

Warfarin deserves first mention, for in 1959, Sevitt and Gallagher[3] showed that injured, burned and postoperative patients were protected if given oral anticoagulants. A decade later, effective prophylaxis with dextran infusion was reported.[4] More recently low doses of heparin were demonstrated to prevent thrombosis[5] and death from embolism.[6] Heparin, it is now appreciated, augments the naturally-occurring inhibitor of activated Factor X, the heparin co-factor, also anti-thrombin III.[7] Among these drug regimens each has some relative advantages or disadvantages and in some reports they have been compared with one another in regard to efficacy and to their side effects.[8] [9] [10]

Drug Prophylaxis of Unproven Effectiveness

Controversy continues around the evaluation of aspirin and other "platelet-inhibiting" drugs. A careful review by Genton et al.[11] criticized the design of some aspirin trials, especially those which report it to be effective. Better designed investigation, on the other hand, tends to show aspirin to be ineffective.[12] [13] This was our experience. An advantage for aspirin was suggested when the control group was not studied concurrently,[14] a design defect found in other reports.[15] When a fully double-blind randomized comparison of aspirin with placebo was later undertaken, we found aspirin provided no protection after hip joint replacement. Other work suggests that some platelet-inhibiting drugs are weakly effective in patients at lesser risk than those undergoing total replacement of the hip. In the discussion below, aspirin will not be considered as an effective drug, however.

Who Needs Protection?

Risk factors associated with venous thrombosis and pulmonary embolism have been described[16]. Some are more important than others and the validity of some may be anecdotal, only. Several factors present in the same patient does increase the risk of thrombosis above that obtaining if one or none are present. There are too few reports of systematic analysis of risk factors related to observed occurrence of venous thrombosis after particular operations.[17] [18] If a sufficiently large sample has been studied, a coefficient can be derived for each risk variable from which a discriminant function can be calculated—one number expressing risk relative to the whole group. This type of calculation may be useful subsequently to predict the likelihood of thrombosis for a similar patient, and to inform the selection of a plan for prevention. Some low-risk subjects could be spared the hazard of a drug which would be more justified for a high-risk patient. The figure ranks over 300 patients who underwent hip reconstruction according to discriminant function based on three variables. (Figure 1). After this operation the risk varies from 10% to 75% approximately, considering only these three variables. Evidently all deserve preventive treatment, though not to the same degree and the discriminant function is at least a way of emphasizing these differences between patients.

Significant risk factors will vary according to the type of surgery, the underlying disease (e.g.—cancer, arthritis) and the type of hospital in which the observations were made. This sophisticated method of data analysis is perhaps too cumbersome for estimating one patient's risk at present. It may be sufficient, now, to add risk variables arithmetically, disregarding computer-generated weighting coefficients, which express the relative importance of each variable among the sample studied, only. Certainly, the following factors are important; they are arranged arbitrarily in the order of relative importance that has been reported elsewhere.[18]

Operation on the lower limb
Prior thromboembolism
Age over forty
Pre and post op immobilization
Obesity
Cancer
Estrogen therapy

The age at which the risk of venous thrombosis becomes an important risk factor is not a precise determination. Patients younger than 40 are probably in a low-risk classification, and those over 60 are definitely at increased risk. Between 40 and 60 the incidence rises linearly. Patients confined to bed at home or in a hospital by their primary disease or for complex, invasive diagnostic workup, come to surgery with a high risk of incurring postoperative venous thrombosis.[19] Perhaps for this reason we found a significant relation between venous thrombosis after hip joint replacement in relation to the degree they were crippled before surgery. The list of risk factors should include congestive heart failure if this factor cannot be modified by specific therapy preoperatively, for surgical patients. The presence of heart failure in non-surgical patients would be, by itself, reason enough for drug therapy for prevention of thromboembolic disease. Other factors could be added to the list for which there is statistically significant evidence of an association with venous thrombosis. The listing above is a minimal description of factors deserving consideration.

The Risk of Bleeding

Relative or absolute contraindications to drug prophylaxis attach to specific surgical procedures. Unusual problems in surgical hemostasis follow retroperitoneal dissection, major joint replacement and prostatic surgery. Even a small amount of postoperative bleeding can vitiate the success of surgery on the retina or central nervous system. Recent or continuing gastrointestinal or genitourinary bleeding precludes drugs that modify hemostasis; recent stroke due to hypertension would be regarded similarly. Bleeding during anti-coagulant therapy is most commonly due to drug interaction, aspirin being the chief offender. Drugs currently taken must be listed and considered, therefore. Women over 60 have a disproportionate frequency of bleeding complications during heparin therapy. Certain laboratory tests should be requested to anticipate the risk of bleeding in these circumstances, to reveal classical defects of hemostasis, thrombopenia or liver failure. As a minimum, lab tests should include PTT and estimate of platelet numbers from a blood smear. The template bleeding time (Mielke technique) should be requested if the thrombocyte count is low or if aspirin has been used in the preceding week.[20] Beyond this simple evaluation, the opinion of a hematologist should be obtained if specific coagulation factor deficiency is revealed.[21] Taking together the elements which increase the risk of bleeding on preventive drug therapy the individual patient's status can be classified. At this point, alternatives to drug therapy may need to be considered, with reference to the risk of thrombosis and the likelihood of bleeding, as already determined in the way described.

Alternatives

Four possibilities need to be considered: 1.) Early ambulation, elastic stockings, bed elevation and supervised exercise of the lower extremities. Where a systematic study of the effectiveness of these measures together has been undertaken it was possible to show that venous thrombosis was significantly reduced only among patients older than 60.[22] Since preventive stockings that embody the pressure gradient principle have become available, there has been further evidence that they do reduce the incidence of venous thrombosis after major operations.[23] There is little reason not to apply these measures to all patients, but it is not so obvious that simple physical measures provide sufficient protection by themselves in the patients who are at greatest risk. In one report, testing the effectiveness of elastic stockings with and without heparin in low doses, it seemed that stockings detracted from, rather than added to the combined prophylactic program.[24] More information is needed.

2.) *Pneumatic leggings.* Alternately inflated "boots" increase the speed of venous flow, favor the emptying of calf veins and valve pockets during periods of relative venous statis, and may stimulate release from the endothelium of an "activator factor" which favors lysis of venous thrombi. Controlled trials of this method have been reported[25] [26] and show significant reduction in the incidence of venous thrombosis in some groups of patients.[27] [28] The mechanism of this action must be complex in view of the evidence that compression of the upper limb reduce the incidence of thrombosis in leg veins.[29]

No bleeding complications have been attributed to the compression techniques, but it is not yet clear how effective they are for patients in the highest risk categories. Pneumatic leggings are well tolerated for periods of a few days, and so are more acceptable than electrical stimulation, which is limited to a matter of hours, during surgery and in the immediate postoperative period. Even this short period of electrical stimulation however, did significantly reduce thrombosis in patients undergoing surgery not involving the prostate and not for cancer.[30]

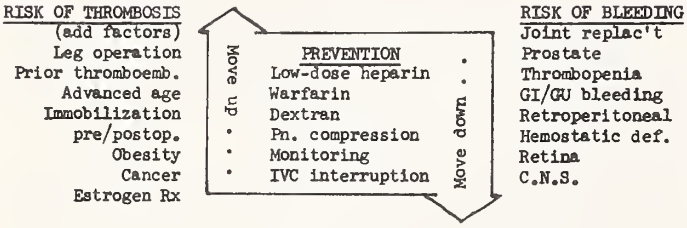
Since there are limitations to both pneumatic leggings and electrical stimulation it seems too soon to recommend either for routine use;[31] rather, they may serve as a valuable alternative if drug prophylaxis is absolutely contraindicated.

3.) *Prospective peripheral monitoring.* Impedance plethysmography and 125 I-fibrinogen leg scanning have been refined and used together in clinical investigations of drugs given for the prevention of venous thrombosis.[32] "Silent" venous thrombosis can be demonstrated reliably, and it now appears that these tests can be used together as an alternative to drug prophylaxis in patients of even the highest risk category. No monitored patient has ever had a fatal or even a major embolus in our experience, including over 400 hip replacement operations.[33] If monitored, the majority of patients, those who do not develop thrombosis, can be safely managed without anticoagulant therapy. For those needing anticoagulants, as revealed by the combined monitoring, such treatment can be delayed until clinically significant thrombosis is demonstrated, and undertaken at a time at which the risk of bleeding may be no longer an absolute contraindication.

4.) *IVC interruption.* Under a few circumstances, caval interruption may be regarded as appropriate prophylaxis. Incidental placement of a clip around the cava is technically possible in connection with laparotomy in which part of the dissection is retroperitoneal—as in colon and aortic resection. The umbrella filter, also, has been placed preoperatively, prophylactically and has prevented all embolism compared to a 20% incidence among controls.[34] More commonly it is used subsequent to the demonstration of venous thrombosis or after one embolus in subjects regarded as presenting a very strong contraindication to anticoagulant drug therapy.

A schematic presentation of the options available can now be offered in relation to the risk of thrombosis and the likelihood of bleeding. The data needed are available from the medical history, physical examination and uncomplicated laboratory tests. The choice of a plan of management remains a matter of judgement, but the decision will be based on the best information available if this type of analysis is made in advance. No special measures will be needed for low risk patients other than elastic stockings and a genuflection in the direction of early ambulation. For high risk patients, there are several alternatives which can resolve the dilemma of maximally effective therapy with the least risk of bleeding. It should be possible to enter the table below, make an estimate of the risk of thrombosis and formulate a plan for prevention that takes into account the individual's risk of bleeding.

Table I


Move up . . .
Move down . . .

RISK OF THROMBOSIS	PREVENTION	RISK OF BLEEDING
(add factors)		Joint replac't
Leg operation		Prostate
Prior thromboemb.	Low-dose heparin	Thrombopenia
Advanced age	Warfarin	GI/GU bleeding
Immobilization	Dextran	Retroperitoneal
pre/postop.	Pn. compression	Hemostatic def.
Obesity	Monitoring	Retina
Cancer	IVC interruption	C.N.S.
Estrogen Rx		

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Internal Carotid Artery Occlusion: Risk of Evaluation and Surgical Management

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ABSTRACT—Reviews of carotid endarterectomy in patients with carotid occlusion have revealed varying results. The discrepancies involving risks of surgery and results among these studies prompted this review of our experience with this condition.

Over a seven year period, 177 patients were found to have at least one occluded internal carotid artery (ICA): 69 with associated contralateral ICA patency, 94 with contralateral ICA stenosis, and 14 with bilateral occlusion. In these patients, angiography carried a 0.6% incidence of severe complications with additional 0.6% mortality and a 4% incidence of transient ischemic attack during study.

Treatment was based on repair of significant stenoses without attempts at restoration of flow through the occluded artery. Surgery was accompanied by a 5% incidence of major complications with additional 4% mortality and a 14% incidence of minor complications. At follow-up, patients with ICA endarterectomy for stenosis opposite occlusion were significantly less symptomatic than patients with either contralateral patency or bilateral occlusion.

In conclusion, repair of significant stenosis of collateral vessels and especially internal carotid artery is warranted in patients with internal carotid occlusion. Furthermore, it can be accomplished with small risk for the patient and expectation of improved quality of survival.

Internal carotid artery (ICA) occlusion is found in 2-10% of all autopsies[1] and in 15-25% of all patients undergoing cerebral angiography.[2, 3] In 6,535 patients examined by the Joint Study of Extracranial Arterial Occlusion, 1,044 (16%) demonstrated ICA occlusion, with associated contralateral ICA patency in 399 (6.1%), stenosis in 557 (8.5%), and occlusion in 88 (1.3%).[3]

Since restoration of flow in the occluded artery is usually unsuccessful and associated with high morbidity and mortality,[3, 9] surgical treatment depends instead on the quality of the remaining cerebrovascular channels, focusing on endarterectomy for significant stenosis of the contralateral ICA.[2, 5, 7] Fields and Lemak reported that surgical treatment was associated with higher risk in patients with ICA occlusion than in the general population with cerebrovascular disease.[3] Mortality during the first month following recognition of arterial occlusion was four times higher in the surgical group as compared with the medical group (22% versus 5%, respectively). Thompson, Austin and Paliman, on the other hand, operated 86 patients with ICA stenosis opposite occlusion without mortality or grave neurologic complication, attributing their satisfactory results to the use of intra-luminal shunt and proper timing of surgery.[8] Others have also reported similar results in their series.[10, 12]

The discrepancy between reported results stimulated this review of our experience with management of patients with ICA occlusion.

Clinical Material

During the seven year period from January, 1970 through December, 1976, angiography performed for initial investigation of possible cerebrovascular insufficiency demonstrated occlusion of at least one ICA in 177 patients. This series was divided into three categories based on the condition of the opposite carotid artery. Sixty-nine patients had no significant stenosis of the opposite artery (occluded/patent = O/P); 94 patients had greater than 50% stenosis of the contralateral artery (occluded/stenosis = O/S); and the remaining 14 patients had bilateral occlusion (occlusion/occlusion = O/O). Review of these patients' records formed the basis for this report.

There were 131 males and 46 females, ranging in

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age from 24 to 89 years, averaging 63 years. The male predominance and patient age data were similar in each group. Only one patient was younger than 40 years: this 24 year old female has sustained several complications of oral contraceptive usage, including thrombophlebitis, pulmonary embolism, and cerebrovascular accident (CVA). Associated risk factors previously documented were evident in this population with similar incidences in each group: hypertension in 60%, cigarette smoking in 42%, coronary artery disease in 38%, peripheral vascular disease in 34%, and diabetes mellitus in 20%.

Clinical Manifestations

Transient ischemic attack (TIA) was defined as neurologic dysfunction with rapid onset, less than 24 hours duration, and complete recovery. Focal, hemispheric TIA included ipsilateral visual symptoms, contralateral sensory or motor dysfunction, and speech abnormalities. Generalized, non-hemispheric TIA included dizziness, syncope, bilateral visual, sensory, or motor changes, and ataxia. Residual neurologic deficit after CVA was considered minor if limited to sensory dysfunction or motor weakness and major if characterized by hemiplegia or aphasia.

Of the total 177 patients, 52 (29.4%) were currently asymptomatic: 14 (7.9%) were studied because of bruits alone, and the remaining 38 (21.5%) were studied because of prior CVA. 125 patients (70.7%) experienced current TIA for 1-80 months, averaging 6 months prior to angiography, with 41 (23.2%) of these patients suffering prior CVA. Thus, 79 patients (44.7%) had sustained prior CVA from 1-240 months, averaging 23 months prior to study. Data regarding presence or absence of TIA prior to CVA was insufficient for analysis.

The TIA were nonhemispheric in 44% of the patients, with the remaining TIA evenly divided between left and right hemispheres. Focal TIA were related to occluded ICA twice as often as to contralateral ICA. Similarly, the CVA were evenly distributed between left and right hemispheres, but were more commonly related to occluded than contralateral ICA by 4:1 ratio. Neither the location nor the referable ICA varied significantly among groups for TIA or CVA. Neurologic deficit after prior CVA was absent in 19 patients (24.1%), minor in 52 (65.8%), and major in 8 (10.1%), without intergroup differences.

Angiography

Angiography was performed most commonly by left percutaneous and right brachial blowback injections, occasionally supplemented by left brachial blowback injection for visualization of left vertebral artery. Bilateral percutaneous and aortic arch injections were also performed. No patient was studied within four weeks of CVA.

Angiography provided the basis for classification of patients into the three groups: O/P, O/S, and O/O. Ulceration was not evident in any O/P patient, but 17 O/S patients (18%) revealed ulceration of the stenotic lesions. Right and left ICA were occluded with equal frequency in all patients, without significant intergroup variation, but the incidence of occlusive disease in vessels other than ICA was progressively greater in O/P, O/S, and O/O patients, respectively.

There were nine complications directly attributable to angiography (5.1%): two were major (1.1%), including one mortality (0.6%), and seven were minor (4.0%) (Table 1). The major complications were limited to O/P patients: a 64 year old female without prior cardiac history suffered a subendocardial infarction from which she recovered; and a 56 year old male with hypertension and coronary artery disease sustained a massive CVA and expired three days later. The CVA was appropriate to occluded ICA and occurred during opposite, left percutaneous injection. His prior cerebrovascular symptoms were limited to TIA appropriate to ICA occlusion for 1 month.

The seven minor complications were TIA which occurred during injection. Three were appropriate to occluded ICA (1 O/P patient, 1 O/S patient, and the O/O patient) and the remaining 4 TIA were appropriate to opposite ICA (1 O/P patient and 3 O/S patients). In each case except the O/P patient with TIA appropriate to patent ICA, the complicating TIA were indistinguishable from current symptomatology.

Table 1

COMPLICATIONS OF ANGIOGRAPHY BY PATIENT GROUP

Patient Group	*Total*	*Major Complications*	*Minor Complications*	*Mortality*
O/P	69	1 MI (1.4%)	2 TIA (2.8%)	1 CVA (1.4%)
O/S	94	None	4 TIA (4.3%)	None
O/O	14	None	1 TIA (7.2%)	None
Total	177	1 MI (0.6%)	7 TIA (4.0%)	1 CVA (0.6%)

Abbreviations: O/P, O/S, O/O = occlusion/patency, stenosis, occlusion, respectively; MI = myocardial infarction; TIA = transient ischemic attack; CVA = cerebrovascular accident.

Treatment

Endarterectomy of chronically occluded ICA was considered contraindicated except in unusual circumstances (see below). ICA endarterectomy was performed for ICA stenosis of at least 50%. In the presence of ICA occlusion without contralateral obstruction, external carotid artery (ECA) angioplasty was performed if symptoms were appropriate to the occlusion and if ECA was significantly stenosed (at least 70%). In the presence of bilateral ICA occlusion, vertebral artery angioplasty was done for repair of severe stenosis. Finally, subclavian-carotid bypass was performed for subclavian occlusion and demonstrated vertebral-subclavian steal, and also for revascularization of carotid bifurcation in cases of common carotid occlusion. General anesthesia and intraluminal shunting were routinely employed for carotid endarterectomy.

Five O/P patients demonstrated significant ECA obstruction ipsilateral to occluded ICA. Four of these patients underwent successful ECA endarterectomy and patch angioplasty (Table 2). Two had suffered CVA referable to occlusion 1 and 2 months earlier, and the other two suffered TIA appropriate to occlusion for 1 and 4 months. The fifth patient, a 61 year old male with known coronary artery disease expired due to cardiac arrest upon induction of anesthesia. His prior symptomatology included nonhemispheric TIA and major neurologic deficit after occlusion-related CVA 3 months previously. Four other patients in this group demonstrated significant ECA obstruction contralateral to occluded ICA, but surgery was not indicated due to wide patency of the ipsilateral ICA. No other O/P patient underwent surgery.

All O/S patients required surgery, since critical ICA stenosis afforded opportunity for improvement of cerebral flow by endarterectomy. However, three patients (3.2%) who had demonstrated 95-99% stenosis at angiography demonstrated complete occlusion at surgery and it was not possible to restore ICA flow. One of these patients had ECA endarterectomy and angioplasty for associated significant ECA stenosis, and the remaining 2 patients simply had ICA ligation. The remaining 91 patients underwent ICA endarterectomy. Five of these 91, however, had additional procedures during the same anesthesia: 4 had subclavian-carotid bypass for vertebral steal on the same side, and the remaining patient had ECA endarterectomy and angioplasty for significant stenosis of the opposite side.

The O/O patients manifest end-stage ICA occlusive disease. Six of these patients had no operable lesion. Three patients underwent vertebral angioplasty, three underwent ECA angioplasty, and one underwent subclavian-carotid bypass. The remaining patient was unusual in that bilateral common, external, and internal carotid arteries were occluded. A right common and ECA endarterectomy was performed, and one week later, opposite ICA endarterectomy was attempted, but postoperatively the patient became comatose and expired.

There were 24 complications of surgery in the 107 operated patients (22.4%) (Table 3): nine were major (8.4%), including four thirty-day mortalities (3.7%), and fifteen were minor (14.0%). The major complications included the O/P patient who expired during induction of anesthesia, one O/S patient who on the third postoperative day suffered a CVA inappropriate to operated ICA (which was shown to be patent by angiography at a later date), and seven patients who required reoperation. Two O/S patients had postoperative hemorrhage and during reoperation for hemostasis were found to have thrombosed ICA. Both patients exhibited neurologic deficit after reoperation, and one patient expired within thirty days. The five remaining patients were reoperated for neurologic deficit exhibited immediately postoperatively. Four were O/S patients and one was the O/O patient with bilateral surgery and postoperative coma. The neurologic deficit was appropriate to the operated side in each case, but two patients were found to have patent ICA at reoperation. Both of these survived, and one completely resolved his deficit within 24 hours after reoperation. The two others had thrombosed arteries which were reopened, but one expired shortly thereafter and the other survived without neurologic residual. Thus, the thirty-day surgical mortality was 3.7%, but exclusion of the patient expiring prior to incision brings the mortality to 2.8%. The incidence of grave complications was 8.4%, including CVA, reoperation, and postoperative deaths.

Table 2

PROCEDURES PERFORMED BY PATIENT GROUP

Patient		*ICE*							
Group	*Total*	*Only*	*+SCB*	*+ECE*	*ECE*	*Lig*	*VA*	*SCB*	*None*
O/P	69				5*				64
O/S	94	86	4	1	1**	2			
O/O	14			1	3		3	1	6
Total	177	86	4	2	9	2	3	1	70

*Includes one patient with cardiac arrest during induction of anesthesia.
**ECE done in conjunction with ipsilateral ICA ligation.

Abbreviations: ICE = internal carotid endarterectomy; SCB = subclavian-carotid bypass; ECE = external carotid endarterectomy; Lig = internal carotid ligation; VA = vertebral angioplasty; O/P, O/S, O/O = occlusion/patency, stenosis, occlusion, respectively.

The minor complications were limited to the O/S patients and included postoperative hypertension requiring Arfonad control (8.4%), wound infection which resolved with local wound care (0.9%), and temporary hypoglossal nerve paresis (0.9%). There were 4 TIA (3.7%) after ICA endarterectomy, and in the only one appropriate to the operated side, the operative report described lengthened cross-clamp time during arteriotomy repair. The three remaining TIA were similar to preoperative symptoms, which were TIA appropriate to occluded ICA.

Late Follow-up

Of the 177 patients, 5 (2.8%) were early mortalities, 13 (7.3%) were lost to follow-up, and 159 (92.7%) were followed 1-80 months, averaging 26 months following angiography (Table 4).

The 159 early survivors and their referring physicians were questioned regarding symptomatology, either current or prior to death in late mortalities. 116 (73.0%) were free of cerebrovascular symptoms. Twenty-three patients (14.5%) had persistence of preoperative TIA, 6 (3.8%) had suffered new TIA, and 14 (8.8%) had suffered CVA during the follow-up period. The O/S group demonstrated significantly more improvement than either O/P or O/O groups: 89.4% versus 54% were asymptomatic, 1.2% versus 30% had persistance of original TIA, and 9.4% versus 18% had onset of new neurologic symptoms (CVA or TIA) during follow-up, respectively (P < 0.001).

There were 37 (23.3%) late mortalities, most frequently due to complications of atherosclerosis:

Table 3

COMPLICATIONS OF SURGERY BY PATIENT GROUP

Patient Group	*Total*	*Major Complications*	*Minor Complications*	*Mortality*
O/P	5	None	None	1 CPA*
O/S	94	1 CVA 4 Reoperation 1 Hemorrhage-1 CVA 3 CNS Deficit-1 CVA	9 Hypertension 4 TIA 1 Wound Infection 1 XII n. Paresis	2 Reoperation 1 Hemorrhage 1 CNS Deficit
O/O	8	None	None	1 Reoperation 1 CNS Deficit
Total	107	5 (4.7%)	15 (14.0%)	4 (3.7%)

*CPA occurred during induction of general anesthesia prior to planned surgery.

Abbreviations: O/P, O/S, O/O = occlusion/patency, stenosis, occlusion, respectively; CVA = cerebrovascular accident; CNS Deficit = postoperative neurologic deficit; TIA = transient ischemic attack; XII n. Paresis = transient hypoglossal nerve paresis; CPA = cardiopulmonary arrest.

Table 4

LATE PATIENT FOLLOW-UP

Patient Group	*Late Symptomatology of Early Survivors**				
	Asx	*Same*	*+TIA*	*+CVA*	*Total*
O/P	34** (54.0)	19 (30.2)	3 (4.8)	7 (11.1)	63 (100.0)
O/S	76 (89.4)	1 (1.2)	3 (3.5)	5 (5.9)	85 (100.0)
O/O	6 (54.5)	3 (27.3)	0 (0.0)	2 (18.2)	11 (100.0)
Total	116 (73.0)	23 (14.5)	6 (3.8)	14 (8.8)	159 (100.0)

*P<.001, X2 with Yates' correction.
**Number of patients, percentage in parenthesis.

Abbreviations: Asx = asymptomatic; Same = symptoms unchanged from preoperatively; +TIA = new transient ischemic attacks; +CVA = new cerebrovascular accident; O/P, O/S, O/O = occlusion/patency, stenosis, occlusion, respectively.

myocardial infarction in 21 patients (57%), CVA in 9 patients (24%), ruptured abdominal aortic aneurysm in 3 patients (8%), and surgery for femoral occlusion in 1 patient (3%), with carcinoma accounting for the remaining 3 patients (8%). These mortalities occurred from 2-84 months, averaging 26 months following angiography. Although intergroup variation was not significant, there was higher incidence of myocardial infarction and lower incidence of CVA in O/S patients than in O/P or O/O patients.

Forty-eight month survival rates did not vary significantly among patient groups, either for survival alone (55-60%) or survival free of new neurologic symptomatology (50-55%).

Discussion

Our results reveal that the risk of surgery is slightly greater in patients with ICA occlusion than in patients with isolated ICA stenosis. This would be expected due to their more severe and extensive atherosclerosis.[13] Normally, both carotid arteries provide 80-90% of total cerebral blood flow, so the presence of carotid occlusion places more demand on the remaining collateral vessels for maintenance of satisfactory perfusion.[14] In fact, flow in the contralateral ICA may increase by 40% following common carotid occlusion.[15] Since the functional capacity of the brain is dependent on the integrity of the compensatory mechanisms responsible for maintenance of collateral flow, neurologic dysfunction is more likely if significant stenosis and contralateral ICA occlusion coexist.[16] With ICA occlusion, stenosis of the opposite ICA has greater significance than usual, with 50% instead of 70-80% stenosis critically reducing flow.[17 18] Relief of any significant stenosis would be beneficial by improving cerebral perfusion and, in case of ulcerated lesion, by eliminating embolization.[8 19] Thus, we have continued to perform external carotid or vertebral angioplasty and carotid-subclavian bypass in conjunction with ICA endarterectomy whenever indicated. In the presence of occluded ICA and severely stenotic ipsilateral ECA, endarterectomy and patch angioplasty can dramatically improve symptomatology by providing additional perfusion through ophthalmic artery collaterals.

It is known that ICA occlusion may be silent,[3] as in 8% of our patients. The TIA or CVA that result in patients with ICA occlusion most often are appropriate to the occlusion, but O/S patients demonstrated three times higher incidence of stenosis-related symptoms than did O/P or O/O patients, further documenting the significance of the stenotic lesion. Furthermore, the O/S patients demonstrated fewer CVA and milder neurologic deficit following CVA than did O/P or O/O patients, suggesting more developed collateral flow associated with O/S. Thus, relief of stenosis in this crucial channel may provide even more collateral flow to the brain than in a unilateral lesion.

The risk of angiography has been reported as high as 4% in patients with occluded ICA, with one-half of the complications fatal,[3] but many of these patients were studied soon after CVA. The risk for the general population with cerebrovascular insufficiency is approximately 1%,[18] without variation according to method.[20] Our results reveal a 4% minor complication rate, as TIA similar to the patients' original symptoms, and it is likely that angiography induced TIA by altering cerebral perfusion by embolism or altered oxygen delivery. Our grave complication rate of 1.2% occurred exclusively in O/P patients, and compares favorably with other figures given for patients with milder degrees of cerebrovascular disease.

Endarterectomy of ICA stenosis opposite ICA occlusion provided improved symptomatology without increased mortality or grave morbidity when compared to medical treatment of isolated ICA occlusion. Mortality was similar in each group, both initially and at 48-month follow-up. However, whereas 98% of O/S patients with preoperative TIA became asymptomatic after surgery, only 36% of O/P or O/O patients had resolved their TIA with medical therapy. This is important, since TIA are pre-CVA symptoms, and surgical therapy, by reducing their incidence, lowers the risk of CVA.[21] Accordingly, O/S patients had one-half the incidence of later neurologic complications of O/P and O/O patients, 9.4% versus 16.2%, respectively.

In fact, surgery may indeed provide more benefit than realized. It has been reported that medical treatment of O/P and O/S patients provides 87% and 62% 42-month survival, respectively,[22] and worse outcome would be expected in O/S patients due to more widespread disease.[13 16] Our results, however, indicate equal survival and improved symptomatology in O/S patients, suggesting that surgery effectively and safely converts O/S to O/P for improved patient longevity and quality of survival. This hypothesis is not, however, proved by this study.

Others have studied O/S patients treated medically and surgically to discern natural history of the disease and best treatment. Studies have revealed surgical mortality of 0-40% and additional grave mortality of 0-30%.[2 13 16 19 21 24] There is no question that these patients exhibit the poorest result in any series of endarterectomies, but there are means of lowering morbidity and mortality to levels close to those obtained in patients with isolated unilateral ICA stenosis.

It has been well documented that endarterectomy of ICA occlusion is most often unsuccessful.[8 13] Furthermore, it cannot reverse neurologic deficit after completed acute CVA, and may convert ischemic to hemorrhagic CVA with disastrous results.[3] Therefore, surgery should not be performed within 4 weeks of acute CVA. Since angiography is only performed for investigation of possible surgical intervention in these patients, it too should be delayed until surgery can safely be performed, should it be indicated. It was known in 1960 that cross-clamping of a single patent ICA is extremely dangerous.[25] Intraluminal shunting provides continued perfusion during endarterectomy and is especially important if contralateral ICA is occluded.

The main cause of high mortality during follow-up is atherosclerosis, as evidenced by the high incidence of myocardial infarction, CVA, and ruptured abdominal aortic aneurysm. Several studies have exhibited better results in O/S patients with medical than surgical treatment simply because the high surgical mortality is never overcome,[26] and others have suggested that surgery be contraindicated by the presence of coronary artery disease or hypertension. However, the symptomatic relief provided by surgery can more than compensate if early morbidity and mortality are maintained at low levels.

It remains that there is no difference in the risk of angiography or treatment among these three patient groups, yet the operated patients (O/S) enjoyed significant relief of symptoms and were potentially protected against grave neurologic complication and shortened longevity. In conclusion, we believe that repair of significant stenosis of collateral vessels and especially internal carotid artery is warranted in patients with internal carotid occlusion and that furthermore, it can be accomplished safely, with advantages far outweighing the risks involved.

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Differential Management of Raynaud's Syndrome Based Upon Angiograms

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Raynaud's original description of the clinical syndrome of digital cyanosis changing to pallor with coldness, accompanied by more or less local pain, triggered by cold, stress or other events and at times leading to small necroses or even to loss of fingers was developed in a thesis in 1862 and published in 1874.[1] During the ensuing century there has been continued controversy based upon lack of understanding of pathogenesis, confusion of terms, inability to produce the disease experimentally and failure to recognize the multiplicity of causes. Despite many clinical studies of these questions treatment continues to be empiric and often quite unsatisfactory. Patients with Raynaud's phenomenon or syndrome may be classified as primary (which really means that no cause can be found) or as secondary to some process known to be associated with these ischemic changes.

Many patients originally believed to represent primary Raynaud's disease will later require reclassification either because a primary process is found or because new knowledge occurs. Thus evidence has recently appeared to indicate that many patients with Raynaud's syndrome have an auto-immune disorder associated with a variety of associated conditions including lupus, scleroderma and other collagen disorders. Porter and his associates in 1976 evaluated 100 consecutive such patients by means of multiple studies and found 81% to show significant immunologic abnormality with 57% having "a well defined auto-immune disease."[2]

Primary Raynaud's Disease

Primary Raynaud's disease is usually seen in women, is often bilateral, is particularly triggered by cold, but may also occur during periods of stress and is marked by periods of exacerbation and remission.

The reversible acute ischemia appears to be due to hyper-reactivity of the smooth muscle of the walls of the digital and hand arteries. Vasoconstriction mediated via the sympathetic nervous system has little effect upon this functional problem and sympathectomy is not effective for long.

While the color changes and associated pain are distressing they are usually reversible and do not cause tissue loss by necrosis unless actual organic obstruction of the small arteries occurs. Indeed it may be doubted that "pure" primary Raynaud's disease ever causes finger tip gangrene.

General experience indicates that many patients who are initially classified as primary Raynaud's disease eventually prove to have an inciting cause or an associated problem so that there should be considerable reservation about the diagnosis of primary Raynaud's disease until careful studies have been made and several years have passed.

Treatment of primary Raynaud's disease is still unsatisfactory because the physiopathology of the arterial sensitivity is largely unknown and there is no specific method of correction. Succeeding suggestions of cessation of smoking, one vasodilator after another and a succession of metabolic drugs have all failed to produce significant success beyond the expected remissions which may occur. Prevention of bodily and digital cooling remain the most rewarding measures and suggest moving to a warm climate for severe cases.

The poor results of surgical sympathectomy for primary Raynaud's disease are discussed later.

Secondary Raynaud's Syndrome

The list of diseases associated with Raynaud's phenomenon is large and is summarized on Table 1. A surgeon such as myself ordinarily does not develop extensive experience with many of these and is therefore not qualified by experience to discuss them.

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Table 1

CAUSES OF RAYNAUD'S SYNDROME

A. Primary Raynaud's disease

B. Raynaud's phenomenon due to:
   1. Arterial occlusion (arteriosclerosis, embolism, thrombo-angiitis obliterans, injury)
   2. Nerve lesions (thoracic outlet syndrome, causalgia)
   3. Intoxication (ergot, heavy metals)
   4. Miscellaneous (scleroderma, disseminated lupus, rheumatoid arthritis, dermatomyositis, leukemia, myeloma, allergic arteritis

A considerable experience has, however, occurred with a group of patients whose syndrome is associated with multiple small arterial occlusions in the wrist, hand and fingers and the major thrust of this presentation is directed toward the diagnosis and management of these patients.

Raynaud's phenomenon due to occlusion of small arteries of the wrist and hand. Small vessel occlusions of the wrist, hand and fingers are more common than have been supposed and in this experience with a group of patients referred by other physicians they out-numbered patients with primary Raynaud's disease. Thus there were 25 instances of primary Raynaud's disease while there were 33 patients with organic occlusions (Figure 1).

Angiography. Accurate visualization of the arteries of the wrist, hand and fingers is the most critical study available since it allows differentiation between ischemia due to organic occlusions and that due to purely functional causes. It is therefore an important key to diagnosis as well as to therapy since the results of sympathectomy are considerably different for these two states.

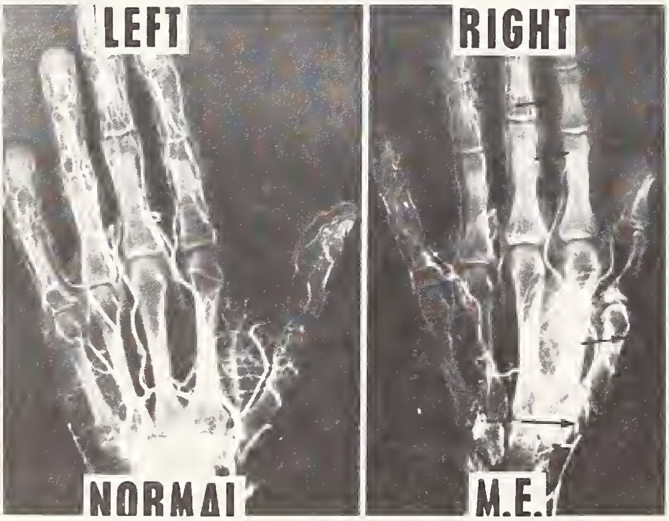

Figure 1
M.E., a 29-year-old female showed multiple occlusions of the vessels of the right hand and fingers associated with severe Raynaud's phenomenon. The normal left hand is compared to the abnormal vessels in the right where the mid-palmer arch is missing and there are multiple occlusions of the arteries of the hand and fingers. She has been asymptomatic with continued warmth of the hand since transaxillary thoracic sympathectomy was carried out nine years ago.

Attempts to opacify the entire arterial system of the upper extremity by placing radiopaque material via a catheter lying within the origin of the subclavian artery demonstrate the proximal vessels well but often fail to show the hand and digital arteries, which are better studied by injecting the material directly into the brachial artery at the elbow.

Our present technique involves local anesthesia for placement of a size 18 Cournand needle—cannula into the brachial artery at the antecubital fossa. 20 cc of Conray 60 are rapidly injected by hand and films are exposed at one second intervals. Heparinized saline is flushed through the system while the films are developed and inspected. 25 mgs. of Priscoline are then injected intra-arterially to produce maximal vasodilation which appears approximately one to two minutes later. At this time a second injection of 20 cc of Conray 60 is made and another series of films exposed (Figure 2).

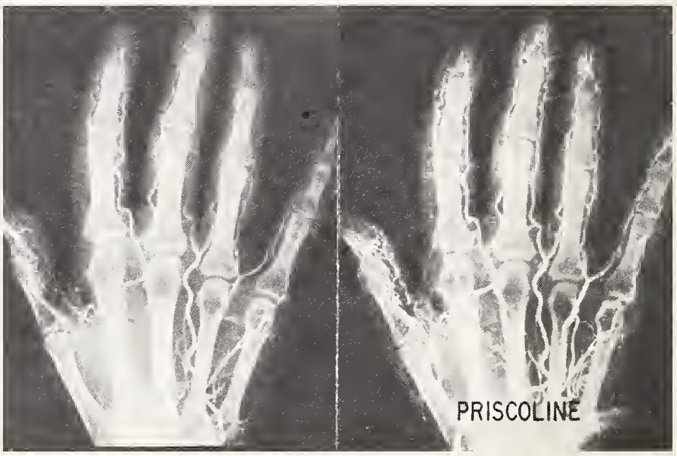

Figure 2
B.L., a 54-year-old female whose digital vessels were all found to be completely patent and who was treated without operation as primary Raynaud's disease. The effect of injecting Priscoline intra-arterially is shown on the right.

The serial films are studied to learn whether or not each vessel of the wrist, the palmar arches and each digital vessel is patent to the tips of the fingers. The pattern of disease is then apparent, either showing multiple occlusions of arteries or patency with thread-like narrowing which is indicative of functional disease. The films following Priscoline often shed considerable light on the problem and have proved to be a valuable addition to the original examination.

Stellate block. Prediction of the effects of thoracic sympathectomy may to some extent be obtained by blocking the upper thoracic ganglionated chain with a local anesthetic solution. This can be easily accomplished in the patient's room in a few minutes and is not a technically difficult procedure.

The patient lies supine with a small pillow beneath the shoulders to insure hyperextension of the cervical spine. The head of the bed may be elevated to 30 degrees to allow an easier position for the operator. A skin wheal is raised with 1 percent lidocaine just lateral to the trachea and a finger breadth cephalad to the clavicle, and through this is passed a long No. 22 needle directly posteriorly until it impinges upon the vertebral body or the disc. The needle lies between the trachea medially and the carotid sheath laterally. After the needle impinges upon the bone or cartilage, aspiration assures that it does not lie within any large blood vessel. Five cubic centimeters of 1 percent lidocaine is injected as the needle is slightly withdrawn from the bony contact, and another 5 cc is injected as the needle is slowly withdrawn another centimeter. This places a sufficient amount of lidocaine within the proper fascial space to insure prompt blockade of the lower cervical ganglia and the proximal thoracic ones since the anesthetic solution spreads widely following its deposition. The needle is immediately withdrawn and the patient is observed for development of a Horner's syndrome within a few minutes. The anterior approach is much easier than any other.

The patient is questioned after the block in regard to improvement of pain or a feeling of warmth, and objective measurements are made of the skin temperature of the fingers with a skin thermometer.

Thoracic Sympathectomy

The results of thoracic sympathectomy for ischemia of the fingers due to organic blocks are good and impress me as better than those of lumbar sympathectomy for ischemia of the distal tissues of the lower extremity. It forms the basis of therapy for organic occlusions of the small hand and finger vessels.

Surgical technique. The deep position of the nerves serving the upper extremity has resulted in a succession of surgical approaches. The earlier use of the transcervical route as described by Selford in 1935[3] did not allow a sufficiently low resection of the ganglionated chain for complete denervation and frequently produced Horner's syndrome by damaging the sympathetic pathways to the eye.

A more limited sympathectomy via a posterior thoracic approach was next popularized by Smithwick.[4] After resecting a portion of the posterior third rib, a short length of the thoracic ganglionated chain (T-2 and T-3) could be disconnected from the spinal cord by severing the rami and cutting the chain below T-3. This resulted in a pre-ganglionic form of sympathectomy since the post-ganglionic fibers were left intact in the disconnected but non-resected trunk. This retropleural approach was somewhat complicated, did not allow wide denervation of the upper extremity and soon began to be changed by several variations to a wider transpleural approach.

There has been continuing difficulty in defining the proper nervous elements for ablation to denervate completely the vessels of the fingers and hand. Not only are there anatomic variations but also surgical failures have occurred because of inaccurate localization. While it was believed earlier that post-ganglionic sympathectomy caused hypersensitivity of the vessels to circulating epinephrine, it now appears that poor results after upper extremity denervation were usually the results of inadequate localization of the nerves or of incomplete operation. Resection of the T-1 through T-5 segment ordinarily severs the pathways to the hand. The occurrence of miosis, narrowing of the palpebral fissure, and enophthalmos (Horner's syndrome) if the sympathectomy disturbs the pupillociliary nerve pathway, limits the cephalad extent of resection of the chain. Removal of T-1 through T-5 fulfills the criteria of denervation without a high incidence of Horner's syndrome and is the preferred ablation.

Palumbo in 1957 asserted that despite previous statements the usual description of the anatomic pathway of the pupillociliary mechanism was incorrect and that it did not transverse the first ramus to the first thoracic ganglion but passed into the upper aspect of the stellate ganglion. This allowed resection of the distal portion of the stellate ganglion (T-1) without production of Horner's syndrome in most patients.[5] His and Lulu's experience was a significant contribution to proper denervation of the upper extremity.[6]

We have in general followed Palumbo's technique but have changed from the anterior thoracic to the transaxillary route as described by Goetz.[7] This transaxillary approach does not cut muscles, allows direct vision of the nerve chain and heals with little pain and negligible morbidity.

Results of sympathectomy. During the past ten years 26 patients with Raynaud's syndrome due to small arterial occlusion of the wrist, hand and fingers have had thoracic sympathectomy (Figure 3). Of these, 25 have had a good long-term result while a single one derived no particular benefit. Seven other patients for one or another reason had no operation and in general have continued to be quite symptomatic.

During the same ten year period four sympathectomies were performed for primary Raynaud's disease. Only one of the four derived significant persistent benefit.

There were no deaths nor hospitalization-prolonging complications among those operated upon.

Discussion

Ignorance of the physiologic pathology of the vascular changes which occur in Raynaud's syndrome persists a century after its description. Further it is still difficult to classify cases of Raynaud's syndrome

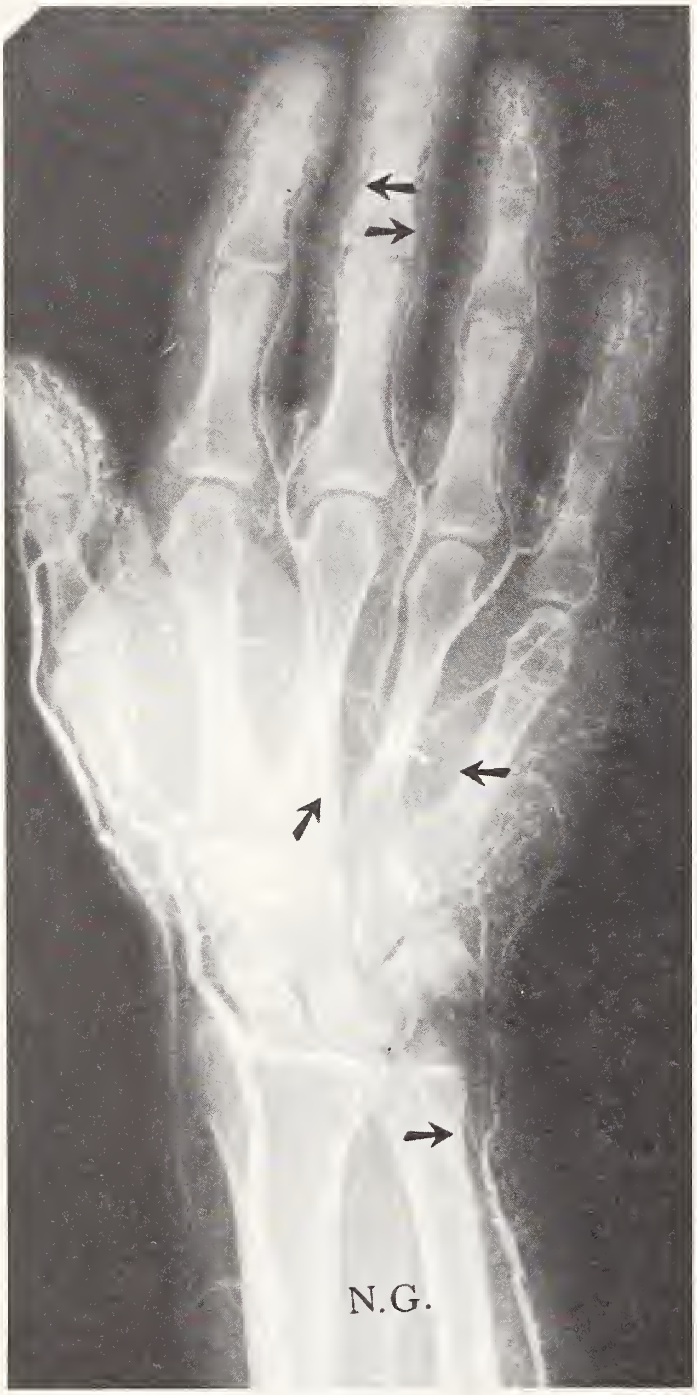

Figure 3
A 32-year-old male had multiple blocks of the ulnar artery, hand and digital vessels. Thoracic sympathectomy produced a warm asymptomatic hand since it was performed two years ago.

as to their association with or causation by various disease processes. Nevertheless there does appear to be some progress in management based upon angiographic differentiation between patients with and without organic occlusion of the small arteries of the wrist, hand and fingers.

Recognition of the common occurrence of such small arterial blocks has been documented.[8] Thus Porter has reported obstructions found in 42 patients and our present series further emphasizes such angiographic findings.[2]

Whether these organic occlusions are due to Buerger's thrombo-angiitis obliterans, to a form of arteriosclerosis or to a non-specific vasculitis is unknown.[9] Most of these patients have not had finger tissue biopsies for fear of poor healing and therefore in the absence of specific information have been classified simply as organic occlusion of the small vessels of the wrist, hand and fingers without making a guess as to specific etiology. The presence of arteriosclerotic lesions at other points at other places in the body in some of these patients, however, suggests that this may be the correct etiology. On the other hand Laws, El Sallab and Scott found that arteriosclerotic occlusion was rare prior to age 50 among 94 random autopsies.[10] Facts therefore are absent and only speculation is possible.

While etiology may be unclear it does appear that surgical management may be based upon the angiographic appearance. Thoracic sympathectomy produces good results when organic occlusions are present but operation should be avoided in their absence.

The misconception that primary Raynaud's disease responded well to sympathectomy was due to confusion in the past between primary Raynaud's disease and Raynaud's phenomenon secondary to occlusive disease of the small arteries of the wrist and hands or other things. This distinction could not be recognized prior to the common use of brachial angiography and it is the main purpose of this paper to separate these two syndromes, the former of which is based upon functional vasoconstriction and the other upon organic arterial occlusion of multiple vessels.

Several experienced vascular surgeons have all remarked upon the poor results of sympathectomy for primary Raynaud's disease. DeTakats stated that "lack of organic obstruction in the presence of clearcut Raynaud's phenomenon is a warning signal of the first order"[11] and Edwards remarked that occurrence of symptoms was so common in primary Raynaud's disease that he found the operation inadvisable "except as a last ditch effort."[12] Johnston, Summerly and Birnstingl reported no "cures" among 75 operated upon 3 to 24 years earlier and stated that "although the immediate post-operative results may be most encouraging, the late results are not,"[13] and "it is doubtful if sympathectomy should ever be advised in Raynaud's disease."[14]

Our similar experience leads us to the belief that while the medical treatment of primary Raynaud's disease is uncertain and unsatisfactory, that the same is generally true of thoracic sympathectomy. Among patients seen during the last ten years there were 24 judged to be primary Raynaud's disease. These all lacked any associated problem and had a brachial arteriogram showing complete patency of vessels but with evidence of extreme narrowing (Figure 2). Surgery was not usually advised because earlier experience has shown it to be ineffective, but it was performed in four instances with only a single good long-term result (Table 2). Transaxillary thoracic sympathectomy is therefore now urged for Raynaud's syndrome with multiple organic occlusions of the hands and fingers but not for primary Raynaud's disease.

Table 2

STATISTICS OF 57 PATIENTS WITH RAYNAUD'S SYNDROME

	33 *Raynaud's phenomenon due to small arterial occlusion*	*24* *Primary Raynaud's phenomenon and other causes*
Male	22 (67%)	7 (29%)
Female	11	17
<20 years	0	0
21-30 years	3	6
31-40 years	7	4
41-50 years	11	6
51-60 years	11	6
>60 years	1	2
Sympathectomy		
Good result	25	1
Poor result	1	3
No Sympathectomy	7	20

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Surgical Management of Portal Hypertension

JERE W. LORD, JR., M.D.

ABSTRACT—Based on certain reports in the literature and on personal observations, I have attempted to define the indications for surgical intervention in patients suffering from one or more of the complications of portal hypertension. I have also described the available operative procedures and have recommended certain ones for the special problems at hand. Such individualization should minimize the mortality and morbidity rates and maximize the quality of long-term survival.

Thirty-two years have elapsed since the first reports appeared of the successful application of portasystemic shunts for the control of hemorrhage from esophageal varices.[1] [2] Hundreds, possibly thousands, of papers have been published and much has been learned concerning the pathophysiology of the liver, the hemodynamic changes in portal venous and hepatic arterial blood flow, and the mechanism and control of hepatic encephalopathy. Further, during the past three decades, there have been significant advances in angiography, in the development of a wide range of antibiotics, and improvement in anesthetic management, including hypothermia.

Following the original techniques of end-to-side

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anastomosis of the portal vein to the inferior vena cava over a vitallium tube and the end-to-end anastomosis of the splenic vein to the left renal vein after splenectomy and nephrectomy, also over a vitallium tube, an impressive array of surgical procedures have been described leading to reduction in operative mortality, better control of post-shunt encephalopathy, and improvement in the quality and duration of survival.

The thrust of this paper is directed towards first, a better selection of patients for operation and second, a critical analysis of the operative procedure which will be best for a given patient. To be sure, the comments are based on the writer's personal experience and built-in prejudices.

Principles, Credos, Prejudices

1. A complete follow-up of each and every patient to death or those alive at the time of reporting is an absolute sine quo non for the derivation of valid conclusions.

2. Resumption of the use of alcoholic beverages will lead inevitably to death from hepatic failure when the operative procedure has been carried out on a cirrhotic patient.

3. The vast majority of patients with ascites, without a history of esophageal bleeding, are successfully managed by conservative means. However, in the few who are intractable, then an operative procedure will often be of value.

4. Emergency shunts are condemned except in the small group not controlled by means of a Sengstaken-Blakemore tube or by the use of pitressin introduced either intravenously or through the superior mesenteric artery. It is far better to tide the patient over for the performance of an elective or semi-emergent shunt with the bleeding under control and with the blood volume, electrolytes and cardio-renal status in an optimal state.

5. The method of Child[3] for the categorization of patients into A, B, and C based on clinical appearance and hepatic function has been most useful. The operative mortality in the C group has been high in most reports and also in our experience, and every effort should be made to improve the patient toward a B category.

6. An elevated prothrombin time above 20 seconds unresponsive to Vitamin K-1 intravenously is an absolute contradiction to operative intervention.

Types of Operations

1. End-to-side portacaval anastomosis
2. Side-to-side portacaval anastomosis
3. End-to-side splenorenal anastomosis with splenectomy
4. Mesocaval shunt, end-to-side
5. Mesocaval shunt with an H graft
6. Distal splenorenal shunt
7. Portacaval shunt with arterialization of the portal vein
8. Ligation of the splenic artery
9. Womack-Johnson gastric devascularization
10. Partial esophagectomy
11. LeVeen peritoneo-venous shunt
12. Boerema, Van Kemmel, Johnston esophago-esophago anastomosis

1. The classical end-to-side portacaval shunt served a useful purpose not only in demonstrating that bleeding from esophageal varices could be controlled, but also in enabling many patients with cirrhosis of the liver to live relatively normal lives. Presently I believe it should be reserved for the control of esophageal hemorrhage following failure of a splenorenal shunt of either type or for failure of mesocaval shunt. In one patient on our service, this sequence of events proved most worthwhile.

2. The side-to-side portacaval shunt was developed primarily to allow for retrograde flow from the liver through the portal vein into the inferior vena cava, an impossibility with the end-to-side shunt. Retrograde portal vein flow is necessary in patients with ascites as an associated clinical problem. Most surgeons currently believe that the mesocaval shunt and the classical splenorenal shunt are superior procedures and accomplish the same purposes.

3. The end-to-side splenorenal shunt following splenectomy was devised by Blalock[4] and Linton[5] independently and employed a suture technique thereby sparing the left kidney. Two of my patients operated upon in the late 1940's by the original vitallium tube technique, which included removal of the left kidney, died in their tenth post-operative years, one from hepatic failure associated with the resumption of large quantities of alcohol, and the other from progression of the ravages of Wilson's disease.

Linton[6] has published results of the end-to-side splenorenal shunt which combine a careful and lengthy follow-up with a sufficient number of patients to conclude that this procedure is associated with effective control of bleeding from varices, with minimal encephalo-pathic complications and long-term survival. Glenn and his associates[7] and Pliam et al[8] have confirmed Linton's observations.

4. Marion[9] and Clatworthy[10] developed the mesocaval shunt which was designed for patients in whom the splenic vein was too small for a satisfactory anastomosis, as in children, patients with post-splenectomy bleeding, and in those with thrombosed portacaval shunts. Gliedmann[11] was one of the first to suggest the end-to-side mesocaval shunt as the procedure of choice in adults in the management of massive hemorrhage from esophageal varices.

5. The introduction of the interposition H graft mesocaval shunt with prosthetic material by this writer and his associates[12] and by Drapanas[13] led other surgeons to employ a variety of venous grafts[14] [15] for the same purpose. (Table 1) Beginning in 1964, we[12] employed woven Teflon as the prosthesis of choice because of its shape-holding characteristic. Drapanas[16] in 1968 first used knitted dacron and found this graft to be satisfactory in 90 patients with an excellent patency rate.

The theoretical advantages of the mesocaval shunt are as follows: (1) It is a functional side-to-side shunt, thereby allowing blood to flow in either direction in the portal vein, depending upon the hemodynamic factors operative in each patient. (2) The size of the shunt is limited to the diameter of the superior mesenteric vein, usually 9 to 11 mm. in diameter. This size is ideal in that the opening provides adequate flow for decompression of portal hypertension and esophageal varices and yet is not so large as to cause too great a flow to the right side of the heart, exaggerating the hyperdynamic state. One of several favorable factors attributable to the mesocaval shunt is the degree of reduction in the portal preshunt pressure. The first eight patients operated upon by the author, showed an average preshunt pressure of 415 mm. of saline which fell to 250 mm. after the shunt, an average reduction of 165 mm. of saline. (3) The superior mesenteric vein is consistently large enough for shunting purposes, a fact not regularly true for the splenic vein. (4) There may be virtue in the location of the shunt further from the liver than the portacaval shunt. It is well known that an arteriovenous fistula has proportionately greater physiological effect on the heart the nearer it is located to that organ. That patients with splenorenal shunts generally do better than those with portacaval shunts has been documented by Linton[6] and is confirmed by our own experience. The mesocaval shunt is approximately the same distance from the hilum of the liver as is the splenorenal shunt.

Table 1

TYPES OF GRAFTS

Woven Teflon - 16-18 mm. diameter	Lord et al
Knitted Dacron - 19-22 mm. diameter	Drapanas
Homologous Inferior Vena Caval Cadaver Graft	Read et al
Autologous Internal Jugular Vein Graft	Read et al
Autologous External Iliac Vein Graft	Fitzpatrick, Nay

6. Cooley[17] in 1963 described a technique wherein the splenic artery is ligated and the splenic vein is anastomosed to the left renal vein by a side-to-side anastomosis allowing the spleen to remain in situ. Later, Warren, Zeppa and their associates[18] modified Cooley's operation by interruption of the splenic vein on the hepatic side of the splenorenal anastomosis, and they also ligated the coronary vein. The splenic artery was left intact. Their extensive studies[19] of the liver's role in protein metabolism and the hemodynamic differences between the distal splenorenal shunt and the mesocaval shunt have placed the former operative procedure on a sound physiological and clinical basis. Thomford[20] has confirmed Warren's observations. With experience, the operative mortality is comparable to the mesocaval shunt, and the incidence of post-shunt encephalopathy is considerably reduced. There are, however, certain contraindications to the performance of the distal splenorenal shunt, some absolute and others relative. In the former category are thrombosis of the splenic vein and earlier splenectomy. Relative contraindications include intractable ascites and previous episodes of pancreatitis causing difficult and dangerous dissection of the splenic vein.

Recently Britton[21] has discussed and compared the various procedures akin to the distal splenorenal shunt. The writer has had no personal experience with these operations.

7. Portacaval shunts with arterialization of the portal vein have been reported by Maillard and his colleagues.[22] On theoretical grounds, the procedure might have merit. However, in most patients with cirrhosis of the liver, portal venous flow is reversed. Information available concerning arterialization of the portal vein is too scanty for conclusions based on long-term follow-up of a significant number of patients. Likewise, I have had no personal experience with this operation.

8. Ligation of the splenic artery was proposed by Blain[23] [24] in 1918 for the control of ascites associated with cirrhosis of the liver. Recently, DelGuercio and his associates[25] described several patients benefitted by ligation of the splenic artery, selection having been made on pre-operative hemodynamic studies plus arterial and venous oxygen differentials. Three of their patients, followed for more than two years, have remained well, free from further hemorrhage, encephalopathy, and ascites.

My own experience with splenic artery ligation has been favorable in a few patients with intractable ascites and hemorrhage from esophageal varices. The decision to rely on ligation alone rather than splenectomy with splenorenal shunt has been based on operative measurement of portal pressure. If the fall in pressure following ligation of the splenic artery has been substantial, i.e. 100 mm. saline or more, or if the pressure has fallen below 300 mm. of saline, then a shunt has not been constructed. One's bridges have not been burned for a subsequent splenectomy and splenorenal shunt is still possible.

9 and 10. The Womack-Johnson[26] procedure of

total devascularization of the stomach includes splenectomy, resection of the upper two-thirds of the lateral three centimeters of the greater curvature of the stomach, extensive paraesophageal dissection and ligation of vessels, intro-esophageal and gastric ligation of varices, ligation of the coronary vein and left gastric artery, and pyloroplasty with vagotomy. Suffice it to say this procedure has not had widespread acceptance. My own experience with two patients suffering from multiple episodes of massive hemorrhage from esophageal varices secondary to an extra-hepatic portal vein obstruction is illuminating. Splenectomy had been performed in childhood. When I first saw the patient at Bellevue Hospital in the early 1950's, I carried out total devascularization of the stomach from the esophageal junction to the pylorus. Three months later she returned with another hemorrhage and was then subjected to a subtotal esophagectomy and an esophagogastric anastomosis. She was followed for some 15 years without further hemorrhage. A second patient with a similar history was subjected to a subtotal esophagectomy and remained free from hemorrhage for 20 years until lost to follow-up.

11. LeVeen's[27] ingenious operation of a peritoneal-venous shunt is a valuable procedure for the management of patients with intractable ascites without variceal hemorrhage. The effectiveness of the operation has been confirmed by others.

12. Boerema's[28] operation of division of the esophagus and re-anastomosis over a Murphy button has met with little success in other surgeons' hands. The operative mortality and postoperative morbidity are forbidding. Recently Van Kemmel and George Johnston[29] of Belfast, Ireland described the use of the Russian stapler introduced through a gastrostomy to divide and re-anastomose the esophagus. In addition, the veins around the esophago-gastric junction are ligated as well as the coronary vein. The vagus nerves are preserved. In some 18 patients operated upon by Johnston, there has been only one hospital death and no rebleeding during an average follow-up of one year. If one is experienced in the use of the stapler, then this procedure might be of considerable value in the poor risk patient in which a mesocaval shunt would be formidable.

Discussion

On theoretical grounds I would select the operative procedures described above as follows:

For the patient with ascites, intractable to the best medical management, the LeVeen shunt is the most appropriate procedure, providing there are no esophageal varices. If there are varices, then studies as described by Del Guercio consisting of percutaneous transhepatic splenoportal cannulation combined with transfemoral splenic artery balloon occlusion, makes possible the pre-operative selection of candidates for splenic artery ligation without the need for portal systemic shunt. Splenic artery ligation alone would suffice if the criteria were fulfilled. If not, then a mesocaval H graft should be seriously considered.

For the cirrhotic patient whose primary problem is massive hemorrhage from esophageal varices without ascites, the distal splenorenal shunt is probably the procedure of choice. The mesocaval H shunt is a close second and takes first place if pre-operative ascites has been significant. Also, it stands first in patients with previous splenectomy and in those with splenic vein thrombosis.

In patients with very large spleens (750 gm. or more) with significant hematological signs of hypersplenism, splenectomy and splenorenal shunt is the operation of choice.

In those patients with an extrahepatic portal vein block, splenectomy with splenorenal shunt is the ideal procedure if pre-operative angiographic study shows a large splenic artery and vein. Otherwise, the mesocaval H graft is a good operation.

Lastly, in poor risk cirrhotic patients with massive hemorrhage from esophageal varices, the stapler procedure of Van Kemmel and Johnston may find a secure place in the surgeon's armamentarium.

The opinions presented in this paper are based on a personal experience with 36 private patients followed to death or to the time of writing with one exception of a patient lost to follow-up after seven years. Of fourteen patients with end-to-side portacaval shunts operated upon between 1952 and 1961 there was one hospital death, and eight lived for five years or longer. Of nine followed for 10 years or longer, 5 survived. Of ten patients who underwent splenectomy and splenorenal shunt there were no hospital deaths and six of nine lived ten years or more. The tenth was lost to follow-up after seven years. At the present time, four are alive and well, 25, 19 and 14 years postoperatively, with the fourth patient having been operated upon only four months ago. Twelve patients have undergone mesocaval shunts between 1965 and 1976, five by an end-to-side technique and seven with the insertion of an H graft. One patient, a group C, died three weeks postoperatively of cardiac failure. Retrospectively, I believe a splenic artery ligation would have been preferable. At autopsy severe coronary artery disease was noted, and the teflon prosthesis was patent without mural thrombus. Of the eleven survivals, one died at five years and another at seven years from hepatic failure related to the resumption of large quantities of alcoholic beverages. No patient has re-bled and none has had a problem with hepatic encephalopathy other than the two who developed hepatic failure with the resumption of heavy use of alcohol. Five of the twelve patients are alive and well, 11, 11, 9, 6 and 4 years postoperatively. Of the other deaths, one was due to coronary occlusion at three years, one due to carcinoma of the pharynx at two years, one from carcinoma of the rectum at six years and one from hepatic failure related to posthepatic cirrhosis at seven years.

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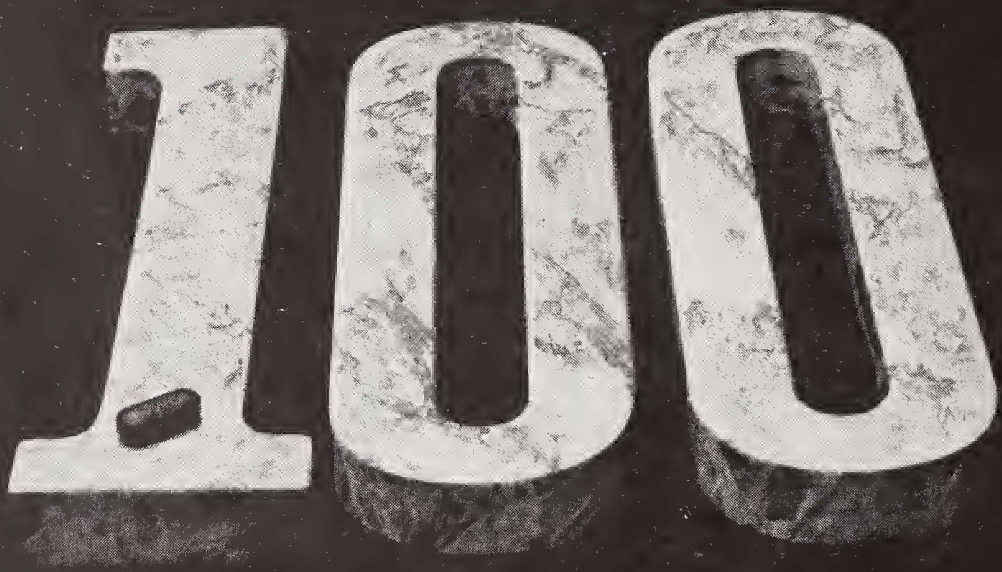

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A Pragmatic Discussion of the Norms of Dying

GARRY M. BRODSKY, PH.D.

The purpose of this paper is to discuss dying from the standpoint of pragmatism. While the pragmatic literature contains no treatments of this issue, the pragmatists were profoundly concerned with concrete moral problems and with the nature of moral inquiry. Moreover, John Dewey, as is well known, formulated a detailed theory of moral inquiry. I believe this theory is a powerful tool for dealing with issues such as dying, and I will employ it in an attempt to analyze in detail the morally problematic nature of this phenomenon. This analysis leads to some fairly obvious suggestions which can help us make dying less morally problematic, and these suggestions and some arguments for them are presented as my conclusions.

While anyone who is correctly said to be dying will, of course, die, there is a good deal more than this to the internally complex situation of dying. For, first and most obviously, dying is a temporally extended affair. Thus, while some people proceed from life to death in, so to speak, a single and relatively short step, those who die at the termination of dying do so at the end of a journey of some duration. Second, dying generally involves suffering, pain and discomfort. Thirdly, during the course of dying a person will usually undergo a decline and decay of his physical, mental and, perhaps, moral powers. Such a person will be increasingly unable to function normally—to engage in his usual activities, think with some degree of clarity and be an interested and vital participant in the world around him. Thirdly, dying places a person in a situation in which he is dealt with as a patient rather than an agent. Almost from the moment a person is seen to be dying his status as a person is altered and this often takes place before he has lost any of his powers. The dying person is treated by medical personnel and his intimates and will, in all likelihood, have little or nothing to say about how he is treated. Consequently, he will have little or no opportunity to exercise his decision-making powers in regard to matters which are of vital concern to him and which he is competent to cope with. In short, the dying person is under the control of other people. Fourthly, the dying person and his intimates share a painful experience, and so the dying person will not only live with his own pain and discomfort but will also witness the sadness he is bringing to his intimates. Finally, in the course of dying death emerges in a singularly poignant and, perhaps, bitter guise. For dying is, so to speak, a prolonged living with death on relatively intimate and direct terms. This will generally bring a great deal of psychological pain and anxiety to all parties enmeshed in the situation. For instance, the intimates of the dying person will see him as living under a clear and determinate sentence of death and, quite possibly, as neither fully alive nor dead and the dying person may come to perceive himself in this way.

In calling attention to these features of dying, I am not unaware of the fact that with the exception of the first, and to some extent the second features, they are not present (much less necessarily present) in all situations of dying. Infants, young children and very senile people go through dying with little or no awareness of what they and others are experiencing. Also some dying people have no intimates. In many cases strenuous efforts are made to keep a dying person from learning of his condition; although such efforts are now seen to be of questionable value. Further, some of the dying are kept relatively free of pain and discomfort. Finally, the psychological anxiety attending dying may need not always be present since it reflects the dying person's wish to go on living and, presumably, if this wish is absent then the anxiety will also be absent. But having acknowledged these points, it still seems to be the case that in most situations of dying, all of the features we have cited are present to a greater or lesser extent, and it is these common cases with which we are concerned.

In view of our description of dying, it might seem as if nothing further need be said in order to explain why it is a morally problematic situation. But it would be a mistake to draw this conclusion. For even if no one would choose to undergo dying, this is not sufficient to make the situation morally problematic. For a situation has this characteristic only if we do not know how to behave in it, or if we suspect or conclude that the actions we appear to be obligated to perform are not morally worthwhile. Now while most morally problematic situations are unpleasant or painful, many unpleasant or painful situations are not morally problematic. Thus if dying is morally problematic, this must be because there are no norms presently existing which apply to it, or be-

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GARRY M. BRODSKY, Ph.D., Associate Professor, Department of Philosophy, University of Connecticut, Storrs. This paper appears here for the first time. It is an especially appropriate article for the series "Humanistic Studies in Medicine."

cause the norms presently available to us are either unclear or unacceptable. Since there obviously are moral rules governing dying, what we must do is show that these norms are not without their failings. In order to do this we must first make reasonably clear what these norms are.

Dying can be looked upon from the standpoint of the dying person, his intimate friends and relatives and the medical personnel responsible for his care and the norms governing dying can be construed as rules prescribing how each of these parties is to behave. Now one such set of norms appears to be little more than an application of presently existing and, indeed, long standing, ethical principles of human action. Thus, it can be argued that the familiar and general goals of medical practice, namely, curing, prolonging life and easing suffering apply with the same force to the treatment of the dying patient as to the treatment of someone with a curable or manageable condition. Of course, it would be absurd to demand that a physician seek to cure or stabilize a condition when he lacks the means to do so. But even in cases where he cannot seek to cure or manage a condition, a physician can try to satisfy the two remaining norms. So, in particular, we may require that he not abandon the goal of prolonging life. Similarly, we may believe that our obligations to respect, be concerned and communicate with and share the experiences of our intimates in sickness and health are not abrogated when they are dying. Indeed it can be argued that these obligations are all the stronger and that it is all the more necessary to acknowledge and abide by them in this kind of situation. For it is when someone cannot command our respect by his strength of personality and is unable to make us want to participate with him in pleasurable experiences that we must rely upon our recognition of such moral rules to bring ourselves to treat him properly. Nor, finally, it may be thought, is the dying person free to regard himself any differently when he is dying than when he is well or ill. For in becoming fatally ill he has not lost his human status or value, and consequently his (and our) regard and respect for his life and person should not be questioned in this situation. To go a step further, it might be urged that dying puts these norms and values to the test, and that it is here that they display themselves in their full glory. In this regard, perhaps, they are like such virtues as courage and prudence, which also are best displayed in critical and painful situations.

Of course it can be pointed out these norms are quite general. For instance, it is not clear that we can decide by referring to them whether or not the dying person is to be informed of his condition. Nor do they appear to specify the extent to which physicians must prolong life at the cost of not easing suffering. But it can be replied that somewhat similar points hold in regard to their employment in more humdrum situations. Thus the question of whether or not the dying person is to be informed of his condition can be looked upon as no more than an instance of a more general tension between the concern we have for the happiness of our intimates and our obligation to respect them as human and thus rational animals. Similarly, it can be argued that in all but the most easily managed of medical cases, those in which a pill or the injection of a drug results in an easy and speedy recovery, the physician must strive to achieve a balance between easing pain and discomfort and enhancing the long range health prospects of his patients. In short, these norms appear to function in the present case not as specific recipes for handling concrete situations but as general sign posts indicating how we are to proceed and that, as we have just suggested, is how they are usually employed.

A far more serious objection to this position is that it apparently overlooks or ignores the fact that dying is a distinctive kind of situation which may well call for equally distinctive rules of behaviour. For the norms we have specified require us to treat the dying person as if he were no more than a very seriously ill person and that, unfortunately, is exactly what he is not. Of course the theoretical issue here does not concern our obligations to care for, communicate with and not abandon him. For while empirical studies concerned with the treatment of the dying have shown that special efforts must be made to secure conduct meeting these moral standards, no one would question the standards themselves. This is not, however, true of our obligation to prolong the dying person's life. For if we abide by this obligation, we will often be forced to subject him to pain and discomfort and to enlist him in our quest to add to his days of life. While it surely makes sense to do this when there are grounds for hoping that such efforts will be rewarded by the person's return to an acceptable state of well-being, what is their value when the most that they can yield is another week or month of life spent as e.g., a drugged or comatose patient on a hospital bed?

It might be thought that this question should decide the argument for all except those who think that God has commanded us to prolong human life whenever we can and whatever the costs and results may be. But I believe that matters are somewhat more complicated here. There are reasons and motives for adhering to all the norms we have specified which do not rest upon a refusal to face the fact that a dying person is dying and do not invoke implausible divine commandments. For it can be argued that modifying or dropping the norm of prolonging the life of a dying person is a violation of that person's value and status. Now our beliefs about the nature of human persons are important and deep-seated ones and they in turn constitute the basis for defending the position we have just sketched. Unless we acknowledge this and at least indicate some of the implications of altering these beliefs, we run the risk of treating the problem of dying in a trite and superficial way.

Generally speaking, we tend to think of a human person as a substance, a "thing" either present or not as the case may be, but not present in degrees. Thus, while persons may be more or less wise, good, beautiful, etc., something cannot be more or less of a person. Similarly, while a person has an historical career—is born, matures and dies—the person himself is present and self-identical throughout his career. Whether or not this view of personhood is necessarily connected with the familiar dualistic religious view identifying it with the presence of a soul in a body, it obviously lends itself to being pictured in this way and, just as the soul is present in the body so long as the man is alive, so we think that an entity ceases to be a person only at death. Moreover, not only is the person there all along, but being a person is not to be identified with some definite set of features or functions. Admittedly we do, as we must, recognize the existence of such problematic entities as mentally defective and insane human beings. But interestingly enough it is not clear whether they are to be classed as persons. This, I submit, reflects our inclination to adhere to a generous and non-restrictive view of persons. Roughly speaking, we grant personhood to all but those human beings who are most obviously non-persons. This also allows us to grant to these entities moral and legal rights which, again, are not dependent upon any but the most minimal qualifications and abilities. Further, we think of persons as possessing subjective interiority and while we may allow that there is some correlation between the interior and exterior man, we do not think that this correlation is a simple and straightforward one. Moreover, what we value and cherish is the interior rather than the exterior man—what a person *is* rather than what he *does*. Finally, having recognized the existence and importance of the subjective interior of a person, we also hold that this interior can remain functional and intact in virtually all kinds of conditions, bodily as well as environmental. A glance or a nod from a very ill or dying person otherwise unable to communicate is often taken as evidence that the entity before us is still the same complete person we knew in good health and happiness. Similarly, while we acknowledge that some external conditions are brutalizing we are often reminded that some human beings retained their humanity even in the German death camps. In short we think of a person as something very much like a Leibnizian monad or member of the Kantian kingdom of ends—unique, valuable, fully present under virtually all kinds of circumstances and meriting our respect and concern because of his profoundly valuable interior. And because we think of persons in this way it seems entirely reasonable to respect persons, strive to communicate with them and, of course, do as much as we can to prolong their lives to the very end.

While the philosophical problems associated with this account of the nature of human persons are legion and notoriously complicated and while it is, I believe, fair to say that most contemporary thinkers hold that it is untenable, there are both reasons and causes explaining its continued persuasive force.

For, first, it is something of a summary of our pre-philosophical intuitions about the nature of persons. Further, as we noted earlier, the scheme reflects and buttresses important human values. E.g., by stressing human interiority and adopting a generous and absolutistic view of the qualifications for personhood the scheme has the pragmatic virtue of disposing us to seek for and appreciate the worth of human beings who (1) are very different from ourselves and (2) are living under conditions which we might think preclude the existence of human persons. In short, the scheme maximizes our chances for finding human values. But it does not follow that it is either theoretically tenable or that its employment always yields satisfactory ethical results. Thus, even if we grant that there are any number of unsatisfactory circumstances in which an entity can retain its personhood, it does not follow that there are no circumstances entirely and unqualifiedly inimical to personhood. Again, no matter how high a premium we place upon the subjective interior of a human person it cannot, I submit, be argued that so long as a human being is alive and conscious his experience is (or can be) of value either to himself or others. Because the scheme makes of the human person an absolute and ultimately interior substance, it causes us to overlook these obvious facts which, of course, are of crucial importance for the problem of dying.

I will shortly argue that while fifty or one hundred years ago it was quite easy to dismiss these matters as of no practical significance this is no longer the case. But I now want to make a more general point about this scheme. It will be recalled that the scheme was introduced in order to partly explain why some people are unwilling, in the face of fairly obvious facts, to allow that the norm of prolonging life does not apply without qualification to the care of the dying. These people believe that to do this is to violate the ethical status of the human person. They feel, in other words, that like it or not we and the dying person must abide by this norm. Now I am convinced that while many of us would dissent from such a position we do so only with great qualms and profoundly troubled consciences. This, I submit, is because we are still very much captives of this scheme. Part of the explanation for this is that the scheme is not an explicit and clearly marked out theory presented to us with all the *caveats* and qualifications attending a theory as such. Rather, it is much more of a cultural inheritance which, like ordinary language, we acquire without knowing what exactly we are acquiring. Because of this, it has taken precedence over and become independent of the various beliefs, values and, of course, experience which it ties together and which are its 'cash value'—its evidence and operational force. Consequently, when a norm associated with the scheme is challenged or becomes problematic, we find ourselves examining not the norm and its results but the scheme and so we are tempted to reason not that the norm must be surrendered or modified but that an acknowledgement of the dignity and value of the human person forbids us to do this. In brief, the scheme instead of being responsive to novel factual developments and problems and instead of serving as a conceptual means for assisting us to cope with and resolve such difficulties as have emerged takes on the character of a block to inquiry. It obscures the facts and undermines our ability to fashion new norms to cope with them.

Once we gain critical purchase upon this scheme it becomes quite obvious that there is a problem of dying which is constituted very largely by the fact that the traditional moral norm of prolonging life is being employed in relatively novel circumstances. Of course death and illness have always been features of human life. But various scientific, technological and institutional developments have resulted in increasing both the numbers and temporal duration of dying and this, I believe, should be viewed as something of a Marxian transformation of quantity into quality. Interestingly enough this transformation is in part to be credited to activities directed by the scheme and the values we have been considering. It is, in part, because of the extremely high premium set upon human life and the assiduous pursuit of medical goals of curing, easing suffering and prolonging life and also because nature has been subjected to scientific study and technological manipulation that large numbers of people die long and lingering deaths. But while this has been taking place, the norm governing dying and the beliefs about the absolute status of human personhood correlated with these norms have not undergone similar modifications. Consequently when we face this situation we find ourselves employing inherited ethical principles which do not fit it. Perhaps the easiest way to see this is by noticing that until quite recently it was possible to pursue the goal of prolonging life without being forced to face the question: Is all prolongation of human life worthwhile? The reason for this is that until recently there existed an almost universal correlation between prolonging a person's life and returning that person to a satisfactory state of health. This correlation no longer exists and so we can now clearly identify cases where life can be prolonged and health will not be recovered. Because these cases can be identified, it is reasonable and moral to ask whether it is incumbent upon all parties to a situation of dying to strive to prolong life. Further, when we consider this question we also find that it becomes important to differentiate between cases which did not present themselves to us fifty or one hundred years ago. Then it was important to urge that the life of a rich man was worth no more than the life of a poor man. But today what is noteworthy is that while it is obvious that even if someone is dying there is no question but that we should, if we can, add months, weeks and even days of relatively satisfactory living to his life span, the skills and knowledge enabling us to do this also enable us to do more (or better perhaps, less) than this. Here it is worth insisting that since some of the dying can be dealt with as normal persons, there are cases where we can eliminate some of the features which make dying so profoundly destructive of human persons. But to return to the main point, this is not always the case. And so those skills, etc., which enable us to prolong the relatively satisfactory lives of some of the dying also make it possible to keep comatose people alive for significant periods of time, to prolong life at the cost of suffering and to keep people alive and free of pain by using drugs which alter their consciousnesses. With the recognition of these facts it becomes plausible if not necessary to question our policy of identifying virtually all living human beings as persons with valuable subjective interiors.

With the recognition of the above points, the problem we have been discussing gains both in depth and extent and this should at least be taken note of. For the technological, scientific and medical developments which have resulted in a growing population of dying people also allow us to save the lives of infants with congenital birth defects found along with extreme mental defectiveness and keep alive extremely old and senile people suffering from degenerative conditions. Here again the value of prolonging or preserving human life and the relatively generous, easy and absolute identification of a living human being with a full human person becomes, to say the least, questionable.

In view of our analysis of dying and our indication of some of the broader ramifications of this issue, it should be obvious that we believe that the norm of prolonging human life without qualification should be abandoned. We would hope that our treatment of this question has also indicated why it is important to proceed here with caution and thus to avoid bold and dogmatic proposals. For the maximization of our chances for finding human persons and values should not be lightly abandoned. So all we are now willing to contend is that it is reasonable and moral to admit that there are *some* clear cases where it is futile to pursue this quest.

What, more particularly, are the implications of this contention? First, it runs counter to the commonplace assumption in the literature to the effect that it is universally and almost necessarily possible to preserve and enhance a human being's personhood until virtually the moment of death itself or to make the experience of dying worthwhile if not, of course, pleasant or happy. The argument of this paper explains the virtual universality of this assumption and it should also provide a sufficient antidote to it which, hopefully, will stimulate empirical inquiries in this area. Of course I am not contending that it is universally false and neither am I arguing that we should abandon efforts to do the best we can for the dying. Indeed, to the contrary, we have pointed out that there are dying people who are capable of functioning as normal persons and that every effort should be made to treat such entities as full persons. But we have also noted that in some cases it is unreasonable to assume that the proper medical and psychological management of the dying person and his intimates can *always* result in making something worthwhile of the dying situation. I further suggest that the failure to admit this, even as a possibility, vitiates much of the empirical literature on dying. To go a step further, I believe that we should *ask* whether the same is not also true of some very defective infants and some old people with degenerative conditions. In view of the delicacy of this issue, let me insist that all I am now doing is asking for inquiries which do not at the outset take certain findings as taboo. It may be the case that all mentally defective and very senile people can live decent and satisfactory lives albeit not as full human persons. But it may also be the case that there is nothing we can do that can make this a real possibility for some of these people. Finally, returning to the question immediately before us, I propose that in view of what we now know about dying we add to the repertoire of moral actions open to some dying people, and thus allow that under appropriate circumstances it is morally permissible for some human beings to terminate their lives or have their lives terminated for them. In making this proposal I am contending not only that dying persons be informed of their conditions and of what they may reasonably expect to befall them, but that we admit that it is rational and moral for a person facing a situation of dying to choose to end his life. Obviously the question which arises here is: Under what conditions are we to grant a person this choice? I know of no relatively satisfactory general answer to this question and I am inclined to think that the search for one which is not arbitrary will end in failure. We might perhaps think that if a person is suffering a good deal of pain it is permissible or even desirable for him to terminate his life. But some people can, in fact, live with pain and derive satisfactions from their lives even in such a condition. Again, it might be thought that when a person's body can no longer function as a relatively, autonomous organic entity we can allow that voluntary death is permissible. But mechanical hearts and kidney machines are no longer entities of the imagination, and other such devices may become available which render the human body less autonomous and more dependent upon mechanical or quasi-mechanical extra-organic entities. And further, what is important here is not whether the body functions as an autonomous organic entity but *whether the person functions as a person.* So, the most that I would now say is that we could agree that in some cases such a choice is appropriate or permissible.

Finally, it can be pointed out that in making this proposal a not very subtle shift in my argument has taken place. For even if it be granted that the unqualified norm of prolonging life be abandoned, it surely is one thing not to prolong life and quite another to terminate it. Thus even if it is not obligatory to prolong life, it does not follow that it is permissible to terminate or, perhaps, shorten it. Of course the point of logic is sound. But, first, in many cases, once we cease to attempt to prolong life we in fact and knowingly terminate it. Moreover, in these kinds of cases the distinction between doing something and allowing something to happen is "scholastic." Further, if it be granted that in some cases it is permissible to allow a person to die, it seems singularly perverse to hold that all we may do in allowing him to die is to cease to prolong his life and thus 'allow nature to take its course.' To defend such a position it would be necessary to argue that while we may allow ourselves and the dying person to choose the end of death, we must restrict the *means* by which he can achieve this end to the 'natural course of events.' Now as a matter of fact medical practice does not abandon the dying person to the not so tender mercies of nature (or rather, in view of what was said earlier, nature *cum* culture). Rather, something of a compromise is struck and the dying person is generally treated with pain killing drugs which, of course, ease his suffering and hasten his death. So the act of terminating the life of the person is, so to speak, partly performed under a description which is taken to characterize a permissible human action. But no one is really fooled and the question remains: If such actions are permissible, why, if the person chooses, may he not terminate or have his life terminated by some other, quicker and more straightforward means? The burden of my argument is that no rational or moral answer to this question can be given.

Throughout this paper, I have been concerned with how human persons may rationally and morally cope with dying. This, I have argued, is a relatively novel problem which, in part, reflects some very notable achievements in the long-standing human efforts to prolong life and thus preserve and enhance human personhood. Now odd as it may seem, my conclusion is that man, in coping with the problem of dying, may legitimately make use of one of his oldest and fiercest enemies, death.

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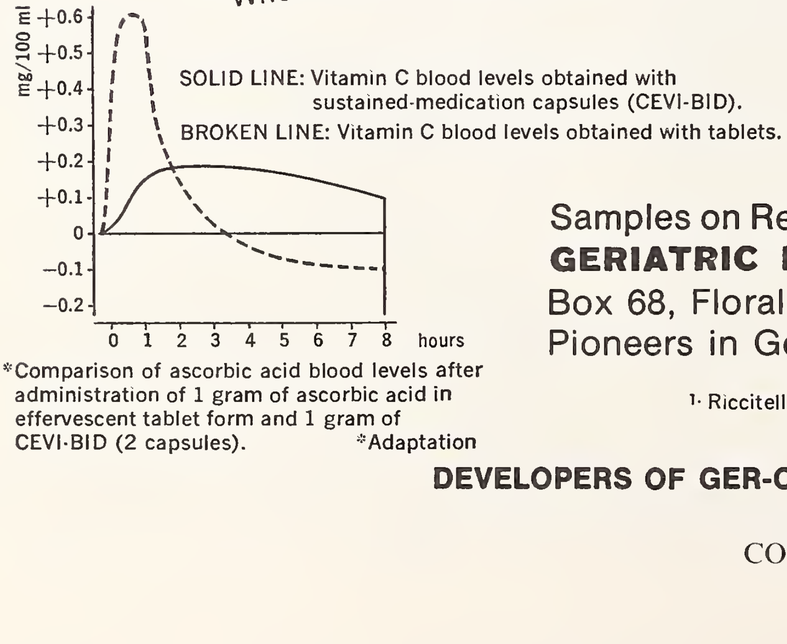

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Rising Health Care Costs: A Schism Between Medicine and Business?

TIMOTHY B. NORBECK

As anyone in the health care field will attest, the subject of rising health care costs is receiving a great deal of attention from almost all segments of the population today. Make no mistake about it, health care costs are escalating. Until recently, criticism of medicine's role in this escalation has come from traditional and expected sources: the federal government bureaucrats and other equally captious critics. There are distressing signals at the present time, however, which indicate that business and industry are giving credence to the charges that medicine is the chief culprit in rising health care costs. It is not difficult to understand the business community's concerns about this problem because any factor which increases employment costs adversely affects the profit statement. Business magazines and journals have been increasing the tempo of articles on health care costs of late in almost stark contrast to years past when an article on the economics of medicine evoked little interest. It appears safe to say that business and industry are not fully cognizant of the many components which contribute to the overall costs. The April issue of the *Atlantic Monthly* (Memo to the Press: "They Hate You Out There") discusses the problems business has had in presenting its point of view to the public. Medicine has had the same problem, but perhaps to a greater extent.

Many experts, including those who have been critical of medicine, have attributed much of the health care cost increases to the fact that our health insurance system has not included incentives to minimize costs. As HEW has stated, "existing health insurance is strongly skewed towards coverage of acute care and hospitalization, often omitting entirely primary, preventive and outpatient care." It is not fair or responsible, however, to place the blame for this phenomenon solely on the insurance companies since they were responding to public demand. To understand the role in rising health care costs that health insurance programs have played, it is necessary to examine what has happened since these mechanisms were devised years ago. In the beginning, health insurance coverage was quite limited as to benefits. It was also the custom of employers who paid for the coverage and the insurers who provided such protection to insist that an initial portion of every cost should be borne by the insured so as to serve as a deterrent to possible misuse of the benefits. This arrangement was to be altered severely in the ensuing years.

Organized labor helped to persuade the U.S. Congress that the employer's cost for insurance benefits for the entire spectrum of medical and surgical procedures should be tax deductible and, furthermore, that these benefits should be nontaxable to the employee or his family. This combination of employer deductibility and employee exclusion served to provide a substantial benefit which appeared to have no cost to anyone. The objective of such strategy was the expansion of coverage, and very few voices were heard in opposition to it.

Unions then convinced employers that they derived more benefits at the bargaining table by paying the bill for expanded insurance coverage for their employees than for the identical expenditure in direct wages which would be taxable to the employees. This growth in benefits seemed to satisfy everyone. Employees were happy to receive them and business did not mind paying for them. The insurers were delighted to increase their flow of premiums over a wide range of risks and medicine did not mind the guaranteed payment aspect. Soon everyone was working in concert to expand the coverage, employee costs began to rise sharply, but only business had any real incentive to keep a lid on costs. It is an understatement to say that the system was not conducive to provident thinking. Especially in view of rampant inflation, any other factors which increase the costs of employment are bound to be of concern

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TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society.

to business. Medicine is worried about rising health care costs, too, but there are many major components involved over which the medical profession has no control.

One of the cost components in medical care has to do with simple American demography. The elderly have had a tremendous impact on health care costs. Their numbers have grown considerably during this century, in large measure due to the excellence of the health care and new technology made available to them. In 1940 there were 9 million people in the U.S. 65 years or older. By 1970 this number had more than doubled to 20.2 million. Our 65 and older citizens are increasing by about 3 to 4 million every decade, currently number 23 million, and will probably reach 27 million by 1985. The over 65 population has also been growing steadily as a share of the total population, from 6.8% in 1940 to 11% today.

The elderly not only require more care than the younger population but also suffer illness more frequently. They experience more chronic and degenerative diseases that require extended care over long periods of time at substantially increased costs. While persons over 65 represent only 11% of the population, they occupy 33% of the nation's hospital beds and account for 40% of the general medical office visits. Obviously we can expect our medical care costs to escalate in direct proportion to the increase in this important segment of our population just as they have up to the present time. Certainly we cannot deny them the care and dignity that they deserve for their many important contributions to this country.

An HEW report from Washington estimates that the "cost of dying" amounts to approximately 20% of the health care dollar. In this context, the cost of dying may be defined as the funds spent for tests and hospitalization on patients who have no hope of recovering. This is another major area impacting greatly on costs over which physicians have little or no control. The courts will have the final say on this complex and sensitive issue.

Generally speaking, a great deal of the concern which we all share over the increases in health care costs can be attributed directly to the unprecedented success of medicine over the past several years and the accompanying developments in new technology. Chronically ill people live more comfortably, the elderly live longer, and the seriously injured are kept alive and returned to normal lives because of today's more sophisticated, complex, and costly equipment.

Medical miracles of the past are almost becoming commonplace. Less than three months ago, a small boy fell under a train in Boston and had his legs crushed and his arteries torn. Thirty-five physicians worked on him for 17 straight hours to save his life and, it appears, his legs as well. A young man was repairing a four-wheel drive shaft recently when his hair became caught in the mechanism. His entire scalp was torn from his head, but thanks to the microvascular techniques learned in free-flap skin grafting applied by six surgeons for 17 straight hours, the scalp was successfully replanted. While I do not know the costs of these extensive procedures, they must have been considerable. Some may feel that these costs were too great, but I'm sure no dissents would be registered by the boys' families. Medical innovations in recent years have often involved diagnostic and therapeutic techniques requiring hospitalization and sophisticated equipment. Among these are chemotherapy, renal dialysis, open heart surgery, organ transplants, burns and trauma, and brain and body scanners.

It has been estimated that "defensive medicine", defined as X-ray studies, laboratory tests, and other procedures not medically indicated but ordered to protect against litigation, is believed to add another $3 to $5 billion per year to health care costs. Certainly this is one component to which business can relate, as the "product liability crisis" has become a substantial problem in Connecticut and throughout the country. The medical malpractice crisis and the product liability crisis have a number of common denominators.

. Critics have caviled at the medical profession for years and are particularly fond of assessing most of the culpability for rising health care costs on the physicians' income component. In rebuttal to these invalid and fallacious charges, it is interesting to note that if all physicians had their incomes slashed by a robust 20%—the savings effected in our total national health bill would be only 3%.

A very important contributing factor to rising health care costs is the way we live—the American life-style. Our affluent and largely sedentary society has taken a tremendous toll on our health resulting also in greater costs to the system. If Americans would get more exercise and limit their consumption of food, alcohol and cigarettes, the state of the nation's health would soar and health care costs would drop appreciably.

A number of health economists and other experts have said that cigarette and alcohol abuse related ailments together cost our health care system between $20 and $30 billion a year. Approximately two million people die each year in the United States, and all but one-fifth of them are attributed to diseases strongly related to personal living and behavior patterns. Massachusetts General Hospital recently revealed a study which indicated that 60% of their hospitalizations could have been averted if people had taken better care of themselves.

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that over $8 billion could be pared from our health care expenditures with improved diets. This report discusses the effect that poor nutrition has on heart, vasculatory, respiratory and mental health problems. With respect to the need for proper nutrition, it is interesting to note that almost 9,000 seats were lost to accommodate the increased American girth when Yankee Stadium was renovated in 1976. The seats, 18″ wide when the stadium was first built, had to be expanded to 22″ wide.

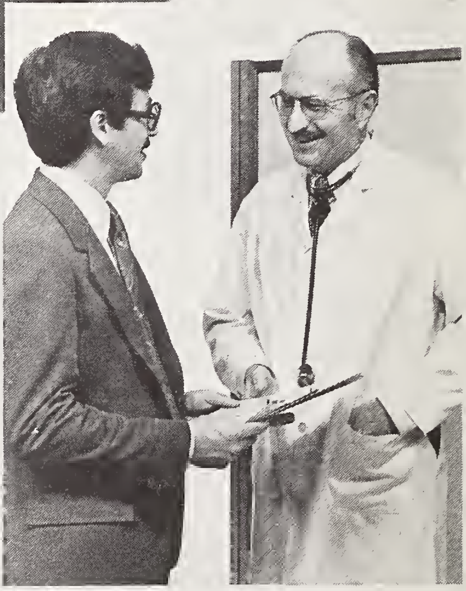
There is hardly a need to explain to business and industry what effect inflation can have on costs. Medicine is also caught in the same grinder. Inflation wreaks the save havoc in the operating costs of a physician's office or hospital just as it has on any other costs of doing business. Cost of living increases to employees, the escalated cost of supplies, equipment, utilities and rent are just some of the more salient effects of inflation.

Hospitals have also been victimized by the critics who inveigh against them for rising costs. New technology has contributed substantially to these increases, and it is important to recognize a significant difference in the overall effect technology has on hospitals when compared to industry. The introduction of new technology in industry most often results in a reduction of labor costs and an accompanying, if not commensurate, increase in efficiency. New medical technology, on the other hand, usually requires not only additional, but also specially trained staff to operate it. In short, new hospital technology means more short-term *and* long-term costs. Hospitals are caring for a growing number of elderly patients afflicted with illnesses such as stroke, cardiovascular disease and cancer. Such degenerative diseases are costly since they require a number of professionally trained personnel and highly technical equipment such as coronary care units and sophisticated therapies. Government regulations and inflation are exacting the same financial toll on hospitals as they have on business.

Waste exists in medicine just as in business and every other endeavor, although it sometimes appears that the federal government has a monopoly on it. We do not have a perfect medical care system, but it is still the best in the world and is striving to get better. American medicine is concerned about the costs of medical care but wants to be sure that present high quality care is not compromised in the attempt to save on costs. One undeniable fact is that the public wants the best possible health care, and the physician wants to do everything he or she can to make the patient better and more comfortable. As mentioned earlier, there are many components in health care costs and the responsibility for achieving reductions falls upon all of us.

The Connecticut State Medical Society initiated with the Connecticut Hospital Association last year a series of seminars geared to help physicians and hospitals become more cost-conscious. They have been well-received by physicians and others involved in the health care field. The Society intends to continue them and is hopeful that new ideas for cost savings will be the result.

Business and medicine have always had a great deal in common. Both believe in the free enterprise system, are constantly looking for new ways to better serve the public and have made important contributions to the development of the greatest country in the world and the quality of life of its citizens. The two, medicine and business, even share the same problems. Both have difficulty in making their opinions and views known to the public, and the persistent harassment of government regulations has become a regular routine. The government induced morass of paperwork is a millstone that inhibits productivity and grows more onerous each year. Captious critics which seek to diminish public faith in medicine and business seem to be gaining ground. There are two sides to every story, but it appears that the positions of medicine and business are receiving less and less attention in the media. In the interest of high quality medical care for all of our citizens, it is important that these two natural allies communicate more often and together address issues of mutual concern.



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CSMS—AEtna Professional Liability Program

Semi-Annual Activity Report

FRANCIS P. GINTY

I. EXPERIENCE

For purposes of continuity of data analysis, the format of prior reports is retained. The exhibit below reflects loss activity through the first six months of the seventh Account Year. In May 1977 we reported the number of arising claims or suits was *841*. At present there have been 1,075 claims made, an increase of 234 cases or *27.8%*. Despite the increase in claims during the last year, the number of open* cases has increased by only 52—from 320 to 372, or *16.3%*. It is a fair assumption that aggressive claim handling has tended to check the upward trend.

Table I

Account Year	*Incurred Losses***	*Arising Claims*	*Open Claims*
1971	$ 1,252,940	108	18
1972	2,476,217	206	50
1973	1,848,144	220	87
1974	2,445,238	255	102
1975	2,172,631	182	60
1976	531,352	94	46
1977 (6 mos.)	188,700	10	9
TOTAL	$10,915,222	1,075	372

The *unloaded* loss** experience reflects an increase of $3,352,433 for a 12-month period, compared to $2,879,295 for the prior year. This represents a *12.2%* increase. For the second year in a row, *each* Account Year reflects an increase in loss dollars. Present loss data clearly supports the rate increases in earlier account years. The average cost per claim (including cases closed without payment) reported last year at $8,993 has increased to $10,154 at the present time. This represents an increase in severity of *12.9%*, a relatively consistent increase in the average cost per claim of $1,100 for each Account Year.

II. INCIDENT REPORTING

The appendix attached to prior reports, reflecting the number of incidents reported and distribution by specialty has been discontinued. The pattern of claim activity broken out by specialty, number and description of incident presented as a separate report at the last meeting at the Professional Liability Committee, presumably is more meaningful to the Society. It will be updated each year. OB/GYN and Orthopedics continue to lead the list.

The following exhibit is retained to represent a breakdown of actual claims opened and reserved† by AEtna, arising since October 1971. Its purpose is to support the need for actuarial loading of unloaded loss data to reflect the effect of the "long-tail"‡ on AEtna's reserving policy and pricing of this volatile line of business. Improved claim reporting is demonstrated by a comparison of April results for each account year, (7 for 1972, 22 for 1977). The quantitative results are demonstrated by Table II.

The exhibit presented in prior reports for geographical location of incidents reported has also been discontinued. The separate report referred to above reflects this data, also. While towns of practice continue to be tracked by the Account Supervisor, the breakdown on the separate report compares the areas comprising the four Claim Review Panel districts.

A review of that data suggests no deviation from prior claim activity. The metropolitan areas of Hartford, New Haven, Bridgeport and Stamford continue to demonstrate the areas of highest claim frequency. The incidence of activity still remains at approximately 40% of the total in Fairfield County, despite the fact only one third of physicians covered under the program practice there.

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*"Open cases" are still in the process of settlement, litigation, and/or other disposition.

**Unloaded loss includes both closed, paid claims, and reported open claims for which reserves have been set aside at currently estimated value. It does *not* include actuarial loading factors for claims incurred but not yet reported (IBNR), future loss development and inflation, or future loss adjustment expense (legal fees and costs).

† "Claims open and reserved" are those reported occurrences whose loss value has been estimated with funds set aside by Aetna.

‡ "The long tail" is the extended period of time after an account year in which claims are reported and litigation is pursued before a final accounting can be made of the actual losses for that account year. For example, two more cases were reported for the first time which occurred during the 1971 account year. In addition, fifteen of the 1971 cases are still in litigation, and it remains to be seen whether adequate funds have been reserved to cover the eventual outcomes of these suits. The earliest possible reporting by insured physicians themselves of potential malpractice claims is vital not only to alleviate the adverse effect of the long tail on insurance rates, but also to preparing an effective and successful defense or settlement.

MR. FRANCIS P. GINTY, Aetna Administrator for the CSMS Professional Liability Program, now in its sixth year of existence.

This report was issued to the CSMS Committee on Professional Liability in May, 1978.

Table II

"THE LONG TAIL"

Account Year	*1971*		*1972*		*1973*		*1974*		*1975*		*1976*		*1977*
	4/72	10/72	4/73	10/73	4/74	10/74	4/75	10/75	4/76	10/76	4/77	10/77	4/78
10-1-71/72	7	35	54	67	78	93	101	103	108	106	107	106	108
10-1-72/73			16	54	100	123	153	182	191	198	199	204	206
10-1-73/74					19	49	82	111	160	198	209	217	220
10-1-74/75							25	76	133	158	198	241	255
10-1-75/76									12	55	166	139	182
10-1-76/77											22	56	94
10-1-77/78 (6 mos.)													10
TOTAL ARISING CLAIMS								472	604	755	841	963	1075

The northern part of the State including Hartford County, accounts for approximately 25%, while New Haven County contributes 20%. The western and eastern counties generate the balance. A theory was advanced in earlier reports that the attorney/patient ratio, greater in the metropolitan areas, accounts in large measure for increased claim activity (referred to as frequency). The less populated areas still continue to reflect a consistent pattern of severity, however.

III. CLAIM CLIMATE

A review of the law suits being brought against program doctors reflects that they are still human and make mistakes. A year ago we reported what appeared to be a decrease of suit activity, with an outstanding number of actions brought at *345*. This was an increase of 181 new suits over one year. As of March 31, there were pending *395* law suits, an increase of only 50 or *14.5%* during the last year. Arising suits have continued to fall off over the last 18 months. Why? On the positive side, it appears reasonable to suggest that physicians are more aware of the causes and prevention of malpractice suits and have become more diligent. The AEtna, through the cooperation of the Society and through the use of the Panel mechanism, is better able to evaluate earlier, potential exposure. Better equipped by increased experience to recognize the problem cases, AEtna is moving cases earlier where the chances of successful defense have become less obvious. Do the data outlined in this report suggest improvement in the claim climate? We think not.

A review of arising law suits, now furnished by agreement to the Society, suggests that the extent of injury and the increased damage exposure are the prime criteria of attorneys in the selection of cases against doctors. If this assumption is correct, it accounts for the increased severity earlier reported and expected to continue in the future.

IV. CLAIM DEFENSE PANELS

Since the inception of the CSMS-AEtna program, one of your Account Supervisor's prime functions has been to assist the Society in implementing the mechanism of peer claim review. The Panel Review system has been widely accepted by the nine sponsored medical society programs insured by AEtna.

Utilizing the voluntary services of more than 500 physicians to date, through the rotation of Panel membership and guest specialists, it is generally agreed the groups provide the best forum available for education, as well as the evaluation and equitable disposition of the cases brought before the four Connecticut panels.

Since the inception date of the program, the number of participating physicians, the claim climate, the variety of cases available for review, the geographic distribution and the population concentration in Connecticut has provided CSMS the greatest number of cases reviewed to date. As of March 31st, the results are reflected in the following exhibit.

Table III

Cases Reviewed		*216*
Vote		
Malpractice	31	
Compromise (Possible Malpractice)	72	
Defend (No Malpractice)	113	
Disposition		
Settled	47.7%	
Defend	52.3%	
	100.0%	
Percentage and Method of Disposition		
1. Disposed		45.8%
a. Settled	66.6%	
b. Tried	8.0%	
c. Withdrawn or Dismissed	25.2%	
2. Pending		54.1%
	(Rounding)	99.9%

V. LOSS CONTROL AND EDUCATION

Realistically, it must be concluded that past or current methodology of physician practice, will not change greatly. The public's hostile attitude, the long tail of malpractice insurance, escalating claim frequency and increased awards are not likely to greatly moderate or go away, either. Not one of these factors, frequently cited as root causes for malpractice, lends itself to cure by the insurance industry.

However, the mechanism to ameliorate the factors cited, is viewed by Aetna as the joint Loss Control & Education Program undertaken six years ago in cooperation with the Society. It was the first of this scope in the nation. The present market availability and preferential rates enjoyed by the Society membership demonstrate the efficacy of that long-term effort. Aetna is convinced that we and the Society must continue the firm commitment of continued cooperation to attain the common goal—prevention of malpractice claims.

Prior reports to the Society have outlined in detail the extent, quality, quantity and character of emphasis of programs presented to physicians. The Loss Control and Medical Section of the Home Office operation, in cooperation with the Branch Office field Teams, continue to meet almost daily with various segments of the health care delivery system. New, but more specific programs are highlighted primarily by examples of claim activity in Connecticut, but nationally as well. Despite some criticism as to content, these presentations continue to emphasize the basics—the common denominator of claim frequency. In the last year five new video tapes have been produced. They are directed at medication errors, patient identification, medical records, uses of medical equipment, sponge and hardware count in the OR and physician responsibility in the E.R. Subjected to professional review before presentation, they have been generally well received.

A fundamental source of cost savings exists through the reduction of patient claims, both in frequency and severity. A deep commitment to loss control is certainly necessary in a group of physicians sharing the risk. Without high standards exercised by all participants, there is a certain guarantee that the best have and will continue to subsidize the haphazard approach of the least committed to loss prevention. Aetna has and will define the problem. The Society must utilize the group incentive to apply peer pressure needed for continued success.

VI. LEGISLATIVE ACTIVITY

We have emphasized in earlier reports that the malpractice problem has both social and insurance aspects. The social implications are properly addressed by legislative remedy. In early evaluation of tort reform by the Professional Liability Committee, the Society adopted the view that reform was a long-term solution, at best, to cope with the market and price aspect of the malpractice problem.

This year, with sensible constraint, the Society elected to pursue adoption of only two bills, directly impacting on the amount of malpractice awards. These were the Collateral Source Rule and Installment Payments. Both bills were actively supported by CSMS-CHA and AEtna in the public hearings before the Judiciary Committee of the General Assembly. Introduced by the Committee on Insurance, they were boxed in the Judiciary Committee. Not discouraged, we will attempt to raise them in the next session. Elimination of the "ad damnum clause" passed in the last session was challenged by a raised bill in this session. It was fortunately rejected by the Judiciary Committee.

The final issue disposed of was the Public Health Regulation on "informed consent." Vigorously opposed by CSMS, CHA and the AEtna in the public hearings, the regulation nevertheless passed the Public Health Council. Referred to the Regulation Review Committee, it was rejected through the aggressive lobbying efforts of the Society and the Hospital Association. This issue is not dead, and may have to be dealt with before the next session. AEtna's Law Department has agreed to work closely with the Society on any legislation dealing with this issue.

It is a realistic assumption that the "malpractice crisis" is now less than a priority concern of the General Assembly. The Society and AEtna agree: the legislation passed so far is as much as can be presently hoped for. Additional action, however, should be a priority concern of the Professional Liability Committee during the coming year.

VII. CONCLUSION

Prior to the inception of the CSMS-AEtna program in 1971, AEtna insured approximately 1500 physicians in Connecticut for malpractice. At present, there are in excess of 4000 private practitioners in the program. In addition, AEtna continues to insure 35 of the state's community hospitals including the interest of their employed physicians. The combination of these factors presents the largest single professional liability exposure insured by a single insurance carrier in any state.

Present rates for Connecticut physicians remain among the lowest in the country. These rates reflect the degree to which program members have committed themselves, under the sponsorship of the Society, to a joint loss Control Program. Earlier prejudice against greedy lawyers and clients, professional witnesses, contingency fees, and the tort law system has been replaced by a basic and inescapable conclusion. Recognizing that many cases grow out of some form of negligence, doctors have responded by the exercise of greater vigilance, diligence, attention to the details of patient care, and particularly in communicating with the patient. This change in behavior is demonstrated by the improvement of patient records examined by AEtna and counsel to the defendants, the attitudes reflected by the panelists in Peer Review cases and even by counsel who represent patients in legal actions against physicians. The rights of patients and the responsibility of physicians to them was a positive factor in the "malpractice crisis" of the early and mid 70's, but is the problem behind us and can physicians return to business as usual? The answer is certain that they can not.

Medicare and Physician Fees

(continued from page 1)

Although the AMA made no direct survey of the section of the HEW report identified as "Groups/Clinics," numerous errors in that section also came to light and these were incorporated in the report forwarded to Secretary Califano.

Other errors in the HEW report included:

—Listing of a physician who died prior to 1975. (Bayar of Chicago.)

—Listing of physicians who were retired prior to 1975. (Watson of Illinois, Peters of Ohio, Sycamore of New Hampshire.)

—Listing of physicians who were not yet in practice in 1975. (Pont of Arizona, Chambers of Indiana, Pladson and Kofron of Minnesota.)

—Listing of physicians who do not live or work in the town identified for them by HEW. (Roberts of Alabama, Amlicke of Michigan.)

—Gross errors in amount attributed by HEW and amount actually received by physician or group. (Bhayani, Cohen, Geline, Olsen, Holley of Illinois; Schwartz of Kansas; Miller of Maryland; Schnitzer of Michigan; Makipour of Ohio, Pauswenski of Virginia.)

"We believe it is only fair to ask HEW what effort the staff made to insure the accuracy of the information it was making public," Dr. Sammons said. "Given the great number and range of errors, we have to wonder if any effort was made at all. The evidence would seem to indicate not.

"This whole fiasco proves the danger in releasing lists of this sort. The publication of lists of names without any explanation or definition is bound to result in injustice, even when the information is correct."

Statement on Release of Medicare Payments

There is something basically dishonest in the broadcast release of names of Medicare payments.

The physicians are identified by HEW as individual recipients of Medicare funds, whereas the payments are often for services provided by many others as well. Many of the physicians listed are hospital-based radiologists, pathologists, anesthesiologists or heads of clinics. Such physicians usually have large staffs working under their direction.

We would also point out that these services are paid for at a rate set by Medicare and based on prevailing charges two years out of date.

If HEW thinks any physician on this list is guilty of fraud, HEW should say so. We will assist in any case where there is good reason to suspect wrongdoing. We too are concerned with rising costs.

But the release of names, addresses neither the problems of cost nor the problems of possible fraud. What is HEW's motive? Releasing names serves only to badger a large segment of the profession and establish guilt by innuendo.

—*AMA News Release, April 10, 1977*

Brief Summary of Prescribing Information
Combined TEGOPEN® (cloxacillin sodium)
Capsules and Oral Solution
For complete information, consult Official Package Circular. (12) TEGOPEN 9/11/75

Indications: Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

Important Note: When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

Contraindications: A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Warning: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

Precautions: The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

Adverse Reactions: Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

Usual Dosage: Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

Supplied: Capsules—250 mg. in bottles of 100, 500 mg. in bottles of 100. Oral Solution—125 mg./5 ml. in 100 ml. and 200 ml. bottles.

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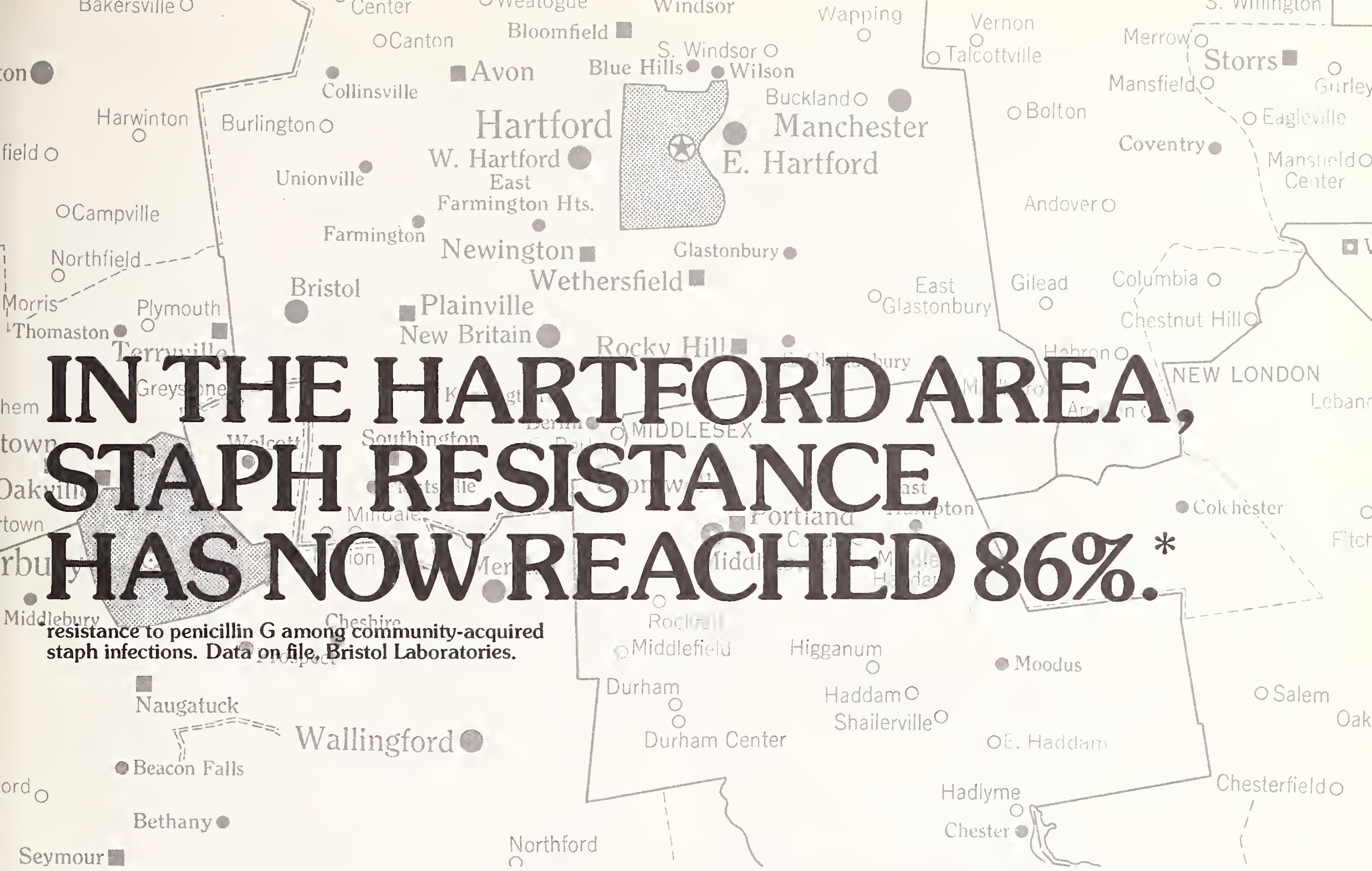

IN THE HARTFORD AREA, STAPH RESISTANCE HAS NOW REACHED 86%.*

*resistance to penicillin G among community-acquired staph infections. Data on file, Bristol Laboratories.

WHEN YOU CAN'T RULE OUT STAPH, CONSIDER

TEGOPEN®

(cloxacillin sodium)

..."THE PENICILLIN OF TODAY"

- Effective against nonpenicillinase-producing staphylococci, beta-hemolytic streptococci, and pneumococci.†

†NOTE: The choice of Tegopen should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates that the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semisynthetic penicillin. The clinical significance of in *vitro* data is unknown.

- 10 times more active against strep than staph.

- Well absorbed from the G.I. tract.‡

‡Maximum absorption occurs when Tegopen is taken on an empty stomach, preferably 1-2 hrs. before meals.

Please see brief summary for prescribing information.

ANNUAL REPORTS

OF THE CONNECTICUT STATE MEDICAL SOCIETY

1977 - 1978

Report of the Council

David A. Grendon, *Chairman*

The Council has met four times since the semiannual session of the House of Delegates last November. Detailed minutes of the December, January and February meetings have been received previously by all members of the House. The minutes of the March meeting are being distributed with the Handbook. This report is, therefore, limited to major matters considered by the Council for a four month period and the actions taken thereon. At the conclusion of the report, as appendices, there are published a series of items of business which are transmitted by the Council to the House for consideration and action. The number given to each of the appendices is identical with the number of the related section of this report.

1. Matters Referred by the House of Delegates 11/19/77:

(a) *Legal Definition of Death:* It was VOTED that the Society make every effort to introduce at the 1978 session of the Connecticut General Assembly legislation relating to the legal definition of death, which was adopted by the House of Delegates, consistent with the following policy statement of the American Bar Association: "For all legal purposes, a human body with irreversible cessation of brain function, according to usual and customary standards of medical practice, shall be considered dead."

(b) *Resolution on Physician Representation on Hospital Boards of Directors:* It was VOTED to carry out the action of the House of Delegates in promoting the inclusion on hospital Boards of Trustees of significant representation of the hospitals' Medical Staffs, nominated by and from such Medical Staffs by transmitting the action of the House to the Chairmen of the Boards of Trustees and Chiefs of Medical Staffs of all Connecticut hospitals. A copy of this letter was also sent to the Connecticut Hospital Association, as information.

2. Malpractice Screening Panel—Public Act 77-249:

This Act provides for voluntary and non-binding pre-trial screening for medical malpractice cases. Acting on a request from the State Insurance Department for a list of twenty names upon which the department may draw in order that the services of such a panel may be made available upon request, it was VOTED that the Chairman of the Council select the names of twenty CSMS members having experience on malpractice screening panels for submission to the State Insurance Department. The physicians named were to be representative of different specialties and geographic areas.

3. Committee on Accident Prevention and Emergency Medical Service:

It was VOTED to approve the Committee's request to change its name to "Committee on Emergency Medical Service," such approval to be transmitted to the House of Delegates for action. The Committee reported, in its request, that its prime function has evolved to concern Emergency Medical Service, particularly since various other Society committees have become involved in matters relating to accident prevention. (Appendix Item No. 3)

4. Medicaid Fraud:

It was VOTED that the resources of the Society's Judicial Committee be offered to the Governor with the intent that the Committee serve as a consultative body in the review of cases of alleged Medicaid fraud, prior to criminal action.

5. Connecticut Ambulatory Care Study:

On May 12, 1977 the Council VOTED that on completion of the study a successor group to the Advisory Committee of the CACS should be appointed. It was VOTED that the Committee on Statewide Planning submit the names of nominees for a successor committee to the Council for consideration and appointment.

Such a list of names was submitted and it was VOTED that all of the nominees recommended by the SWMPC be named as the successor committee to the CACS Advisory Committee.

6. Coalition of Connecticut Health Professionals:

A communication was presented from the Secretary of the Coalition informing the Council that at a meeting of the Coalition it was decided to employ a law firm to act as the legislative representatives for the Coalition concerning Public Act 77-614 "The Reorganization of the Executive Branch of Government," and to assess each member organization a total of $200.00 to cover legislative expenses. Following discussion, it was VOTED to appropriate the requested funds to fulfill our assessment obligation to the Coalition to hire a legislative representative to act in behalf of the Society in the Connecticut General Assembly.

7. Membership in the National Council of State Committees on Continuing Medical Education:

On recommendation of the CSMS Committee on Continuing Medical Education, it was VOTED to grant to NCSC-CME a contribution of $200.00 to help defray the cost of its organization. The National Council of State Committees on CME is a new organization founded with the purpose of promoting communication between the states, aiding in policy formation, relating to CME in states to the needs of practicing physicians, maintaining state medical societies as survey and accrediting bodies for CME within the states, and participating in national accrediting and standard setting councils and boards.

8. Renewal of Contract with Assistant Director for Scientific Activities:

Having received required prior notice of interest in renewing his contract with the Society from Mr. Robert J. Brunell, Assistant Director for Scientific Activities, the Council VOTED, in executive session, to offer him renewal of his contract for a two year period at terms determined by mutual agreement.

9. Committee on Continuing Medical Education:

It was VOTED to approve the following recommendations of the Committee on Continuing Medical Education, and to notify the AMA and the National Council of State Committees on CME of this action:

(a) That the AMA be encouraged to allocate one of its four LCCME seats to a nominee of NCSC-CME; and

(b) That the AMA be encouraged to seek an additional AMA seat on LCCME to be filled by a nominee of NCSC-CME; and

(c) That at such time in the future as NCSC-CME has demonstrated its representation of state societies in general and its organizational viability the AMA be urged to seek representation for the NCSC-CME on LCCME as a separate agency.

10. National Commission on the Cost of Medical Care:

Following discussion it was VOTED to receive as information a summary report prepared by the National Commission on the Cost of Medical Care. This Commission was established by the AMA Board of Trustees and the report will be discussed at the June meeting of the AMA House of Delegates to be held in St. Louis. Also received for information was a resume of this report, which was prepared by Orvan W. Hess, CSMS Delegate to the AMA. It was further VOTED to refer both these documents to the Committee on Statewide Medical Planning, for study and report back to the Council at its next meeting.

There were forty-eight recommendations in the report of the National Commission on the Cost of Medical Care and at the Council meetings on February 12 and March 29, the Council discussed the comprehensive report submitted by the Committee on Statewide Medical Planning, which proposed action on each of the forty-eight recommendations. After minor amendment in some of the proposed action, it was VOTED to refer various items in the report to appropriate CSMS committees for study as to applicability in Connecticut and report their opinions to the Committee on Statewide Medical Planning.

11. Connecticut Medical Institute:

Dr. Orvan Hess reported to the Council on the reorganization of CMI which included a change in name to Health Care Data of Connecticut, Inc. and also a change in membership representation on the Board of Directors, which will be made up of 18 members representing 13 different agencies. The basic functions of this statewide organization, as described in the Certificate of Incorporation, are:

> "To assist in providing comprehensive health care services by coordination of the data needs of the various primarily non-profit health oriented agencies and institutions by establishing, maintaining and operating a statewide health care data center for the purpose of collection and dissemination of health care data, and to furnish to the member organizations appropriate educational programs for the proper interpretation and utilization of the data."

It was VOTED to receive the report as information and to designate Drs. Orvan Hess, New Haven, and George A. Bonner, New Haven, as the Society's representatives on the Board of Directors of this new Corporation.

12. Federal Trade Commission Expenses:

It was VOTED to receive as information the report that expenses incurred for defense against the FTC complaint for 1977 amounted to $61,589.00. Budget allocation was $50,000.00.

13. Employment of a Legislative Counsel:

At its meeting on Dec. 14, 1977, the Council authorized the President, Executive Director, Chairman of the Council, and Chairman of the Committee on Legislation to seek a legislative counsel for the Society. It was VOTED to approve the subcommittee's recommendation that Atty. John F. Pickett, Middletown, be employed as the Society's legislative counsel (lobbyist) for the 1978 session of the Connecticut General Assembly.

14. Committee on Public Health:

Based on a report of the Committee regarding immunization, it was VOTED to approve the following:

(a) That the CSMS support the current Federal Immunization Program for childhood diseases; and

(b) That the CSMS support legislation to make immunization against mumps, measles, rubella, polio, tetanus, pertussis and diphtheria mandatory for admission to both public and private schools, preschool and day care centers.

It was further VOTED that this action be referred to the Committee on Public Health for implementation.

15. Informed Consent:

It was VOTED that the Society continue to cooperate with the Connecticut Hospital Association in its attempt to modify the proposed regulation on informed consent through the administrative process, the Attorney General's office, and the Legislative Review Committee.

16. Preceptorship Program, Committee on Cooperation with the Medical Schools:

It was VOTED to approve of the expenditure of $200.00 to fund a reception for the first year students at the University of Connecticut Medical School for the purpose of introducing the students to the preceptorship program.

17. Council Subcommittee on Administration and Organization:

The Council approved a report and recommendations of the Subcommittee which provides a mechanism for regular reports to the Council on the activities of outside agencies on which CSMS member serve and a method of communicating such information to the membership. At all future meetings of the Council, time will be allotted for these presentations, which cover the following agencies: Commission on Hospitals and Health Care, PSRO's, HSA's, SHCC, Health Care Data of Connecticut, etc. In addition to the above, other members of the Council, the Executive Director and his staff, as well as those county executives present will be expected to report on any significant information regarding agency activity.

18. CSMS Committee on Health Systems Agencies:

The Council established a CSMS Committee on HSA's which would be comprised of all physician members currently serving on state HSA's and the Statewide Health Coordinating Council. The purpose of this committee would be to share information from all HSA's and SHCC and to make recommendations whenever the committee deems them appropriate. Dr. Orvan Hess was designated as chairman of the committee.

19. Revision of Code of Ethics of AMA:

In the AM News of 1/17/78, a proposed revision of the Code of Ethics was published together with a request that all comments and/or views and suggestions be forwarded to the AMA Judicial Council. The Council approved the proposed revision with minor amendments which have been submitted to the AMA Judicial Council.

20. Report—Subcommittee on Annual Meeting Arrangements:

The subcommittee was charged with studying and evaluating the annual dinner as to format and necessity for holding such a dinner. The subcommittee recommended that the annual dinner should be continued and the Council approved this recommendation. It was further reported that an attempt is being made to obtain a major speaker for the dinner and some new innovations would be made in the format and quality of the dinner to provide an enjoyable evening. Councilors were requested to urge their county leadership to attend this function.

21. Report of the Nominating Committee:

The Council, acting as the Society's Nominating Committee, has prepared and approved a slate of nominations for all offices and committee posts elected by the House. The slate is published in this Handbook under "Report of the Nominating Committee" and the Council recommends its approval. (Appendix Item No. 21)

22. COMPAC—Connecticut Medical Political Action Committee:

Having received a report from Dr. John Mendillo, New Haven, Chairman of the Board of Directors of COMPAC, outlining his proposals for rejuvenating the organization, the Council expressed its continued support of the concept of COMPAC and suggested to the Chairman, that he seek the assistance from members from the various county associations in implementing some of his proposals.

23. Annual Report of Standing Committees, Representatives and Advisors:

Being advised by staff that none of the subject reports made recommendations for action by the House of Delegates, it was VOTED to transfer all annual reports to the House of Delegates and to direct the Speaker and/or Vice Speaker "to make recommendations concerning the action required on each report."

24. 1971 Relative Value Guide:

Following discussion of various aspects of the Relative Value Guide it was VOTED to rescind the CSMS endorsement or the 1971 Relative Value Guide. (Appendix Item No. 23)

25. The Chairman will be prepared to respond to questions about any actions taken by the Council at the meetings covered.

At this time, the Chairman would like to thank all those members of the Council and Staff, whose cooperation and assistance have been invaluable.

Report of Delegates to AMA Meeting Chicago—December 4-7, 1977

J. Alfred Fabro

Chairman of Connecticut Delegation

The House of Delegates considered over 188 resolutions and reports—49 reports by the Board of Trustees, 86 resolutions, and 53 reports by other standing committees of the House e.g. Judicial Council, Council on Medical Education, Council on Medical Service, and others.

Connecticut Resolutions

1. *Death: The House of Delegates rejected the resolutions of four states, including our own, urging the AMA to support statutory definition of death.*

Our resolution, adopted by our House of Delegates, urged a statutory definition of death consistent with the American Bar Association's statement: "For all legal purposes, a human body with irreversible cessation of brain function according to usual and customary standards of medical practice shall be considered dead."

Dr. Killeen, a delegate from California, introduced a resolution asking the AMA to support statutory recognition of brain death by individual state legislatures and encourage state medical associations to work actively for such legislation to facilitate the availability of organs for vital transplantation. . . . Utah introduced a similar resolution. . . . The Michigan delegation introduced a resolution embodying the model legislation proposed by Capron and Kass based on "an irreversible cessation of spontaneous respiratory and circulatory functions."

There was quite a bit of discussion pro and con before the reference committee. It finally recommended that these resolutions be rejected and, that the House adopt the stand of the Judicial Council that "determination of death should continue to be based on the clinical judgment of the physician using the necessary available and currently acceptable criteria." And that the "permanent and irreversible cessation of function of the brain constitutes one of the various criteria which can be used in the medical diagnosis of death." Though as of late 1977, 18 states had passed some statutory definition of death, a majority of the House of Delegates believed that this was not necessary; and where legislation is supported, it advised that provisions be included to assure the physician's right to exercise his medical judgment in diagnosing death. The testimony of the Judicial Council and of Dr. Russel H. Patterson of New York, the delegate from the Neurological Surgical Section, opposing a legal definition was influential in the vote.

2. *Medical Staff Section of Representatives to the Hospital Board of Trustees: The House of Delegates adopted our resolution that hospital boards of trustees accept significant representation of medical staffs elected by and from them.*

Our resolution would have the AMA, through its representatives on the JCAH, promote the inclusion on hospital boards of trustees of significant representation of the medical staff elected by and from the medical staff.

Because the JCAH had already adopted this principle, effective in February 1978, the reference committee urged nonadoption. Dr. Bradley, however, on the floor of the House was able to persuade it to adopt the provision as the policy of the House of Delegates of the AMA, as follows:

> "Where not legally prohibited, physicians who are members of the medical staff shall be eligible for, and should be included in, full membership in hospital governing bodies and their action committees in the same manner as other knowledgeable and effective individuals. Other physicians should also be considered eligible on the membership of the governing body. The hospital medical staff should have the right of representation at all meetings of the governing body, by medical staff members elected by the medical staff and the right of attendance, voice, and, if appropriate, vote."

3. *Cost-Benefit Analysis and Decision Theory: Our resolution would have the Board of Trustees initiate a study and report of the applications of the Cost-Benefit Analysis and Decision Theory to the delivery of health care; it was adopted.*

This resolution produced much discussion and support. It requests involvement of the public in discussion of such applications, including the length and quality of life, the ethical decisions as to withholding proposed and/or therapeutic measures, and such influence on the ultimate health decisions involving patient, family, physician, and government. The Board of Trustees will use the resources of the AMA in this study and then report back to the House at the next session.

The resolution appears at the end of this report.

4. *Hospital Privileges for Podiatrists: The House accepted the recommendation of the Board of Trustees that our resolution asking for specific guidelines and delineation of hospital privileges for podiatrists be rejected because of possible anti-trust action.*

On advice of the AMA Legal Department, the Board of Trustees advises that privileges be assessed and granted by hospitals and medical staffs according to local and state conditions and laws. As a principle, the medical profession must exert restraint on anything that will impose limitations or restraints on the practice of podiatrists who are licensed by law to provide direct and independent patient care services.

5. *"Drug-Lag" By The Food and Drug Administration: At our last meeting we introduced a resolution, adopted by the House, asking that there be international cooperation and standards in experimentation and approval for use of drugs among countries with high quality of clinical research, and acceptance of such research by the FDA to relieve the "drug-lag" in the United States.*

The AMA investigated the problem. It found that in fact there was a "drug-lag." And though there was and is quite a bit of research by multinational drug companies of high quality in certain countries, the "FDA has never been willing to approve an American

New Drug Application based entirely on foreign data, no matter how extensive they may be." The AMA had never communicated with the federal government specifically on the subject. Since the resolution, however, it has communicated with the FDA and various congressional committees, even testifying on the subject on several occasions. Whether or not the resolution is responsible, Dr. Donald Kennedy and the congressional leaders in this field have been working toward hastening the process to relieve the "drug-lag," an expression that Dr. Kennedy would like abandoned.

6. *News from, about and by The AMA within the Profession:* This resolution of ours, introduced at the last convention, is directed to the void of information about the AMA to state members who are not members of the AMA—in our state about 50%. As a result of our resolution, convention issues of *American Medical News* are now sent to all physicians following each meeting of the AMA House of Delegates.

The problem is still being studied and a report will be given to the House at the coming convention.

Other Resolutions

7. *The AMA and Specialty Societies: A major, historic, and important change in the philosophy of the organization of the AMA was adopted at this meeting. To promote unity in the profession, it provides that national specialty societies (48) will be represented by a delegate and alternate delegate elected by the individual society to be in the House of Delegates of the AMA.*

This organizational change permits 48 national specialty societies to be represented in the AMA House of Delegates.

It is not the power of a single vote of a specialty society, the American College of Physicians or Surgeons, for example, that will be important, but that each delegate will be the officially elected representative to act as liaison and a conduit between his specialty organization and the AMA. This will bring the various national specialty organizations into the policy-making body of the AMA, to give a unified voice to the medical profession in the country. The various specialty societies have decided that in economic, political, social, and such issues the medical profession should be unified as much as possible, and that the American Medical Association, with official input from the specialty societies, shall be the spokesman for the profession in the country.

The barrier which had to be overcome was the traditional philosophy in organization of the AMA—a federation of state medical societies built on county societies. The fear of the AMA House of Delegates has been that representation and voting strength of the state medical societies would be diluted and possibly overcome by the national specialty society delegates. Furthermore, they argued that specialists could participate in the AMA through their county and state medical association. Finally, however, in spite of strong minority opposition, the idea of a unified medical profession acting through the AMA prevailed. The present number of delegates is 245, 28 of whom are elected by the 28 specialty councils in the AMA; these 28 will be replaced by 48 delegates, each elected by the 48 specialty organizations, making a total of 217 delegates plus these 48=265 total.

8. *AMA Presidency: After several years of debate and resolutions, the House of Delegates reiterated that its President, elected by the House of Delegates, is the elected leader and official spokesman for the AMA rather than replacing the elected President by a full time, nontenured President appointed by the Board of Trustees.*

The problem has been this: There are three important officers in the AMA: the President, elected for a one-year term (restricted to one year) by the House of Delegates; the Chairman of the Board of Trustees elected by the Board, with a one-year term and a limit of three; and the Executive Vice President, appointed by the Board of Trustees with no limitation of tenure.

Though the title AMA President, as in our political system, implies being the first, his one-year term lacks a desired continuity and limits his being chief spokesman for the AMA. Some delegates wished for a type of spokesman as epitomized by George Meany for example, President of his union with an unlimited tenure of office. He is elected by his delegates at an annual convention and is recognized nationally as its spokesman.

Some of the difficulties are due to the fact that the AMA is incorporated under the laws of Illinois, with the Board of Trustees analogous to the Board of a business corporation. The chairman of our Board is elected by the Trustees. He is a frequent speaker for the Association, and as Chairman of the Board, carries quite a bit of authority, considered by many delegates to be the most important office in the AMA.

At present, Dr. James Sammons is the Executive Vice President. There is agreement that he is doing an outstanding and commendable job and does well when he speaks for the Association. But the more the House discussed the problem, the more it was unwilling to relinquish its authority to elect the President. Furthermore, it did not like the idea of the AMA spokesman's being a member of the Staff, appointed by the Board of Trustees. If the Executive Vice President were made the chief spokesman and the titled President of the AMA, it would mean elimination of the offices of presidency and the president-elect. The House of Delegates finally decided that there be no change in the present organizational setup. The President, elected by the House, will continue to be considered the leader and spokesman of the AMA in fact as well as in symbolically.

9. *National Commission on the Cost of Medical Care: The House on the recommendation of the Board of Trustees postponed discussion and action on this very important 30-page summary because it was distributed to the delegates at the very beginning of the meeting without either the 3-volume task force report and minority opinions.*

This report is the result of 18 months' work done under the auspices of and financed by the AMA, with only a small minority of AMA members on it. Non-AMA and lay members commended the AMA because no pressures were put on them in the study and report though some of the recommendations are contrary to present AMA policy. Though several resolutions were introduced to the House that there be an immediate study of the summary at this convention, the recommendation of the Trustees that such discussion be postponed until the next convention prevailed. In the meantime, more information, including the full 3-volume report, will be sent to the delegates and state associations for their study before the next convention. There just was not enough time to study such an important document, especially without the background reports or minority opinions.

10. *Abortions:* The House of Delegates adopted a resolution on abortion introduced by the New Jersey delegation, stating:

> "That the AMA advise Congress, HEW, and all other applicable third party payers, that elective abortion services rendered under Medicaid and in other third party payment programs should be recognized as compensable services."

11. *PSRO: Status Report:* The House adopted the report that (1) reaffirms physicians should be reimbursed for all mandated PSRO activity, (2) the level of reimbursement be negotiated by each PSRO with no arbitrary dollar limit imposed on the PSRO by the federal government, (3) recommends opposition to use of Medicare provider numbers to identify hospitals, patient or physician and PSRO information system, (4) reaffirms its stand that the PSRO-derived information remain confidential and that it not directly or indirectly identify the specific hospital, patient or physician.

12. *Insurance Coverage for Psychiatric Care:* Adopted: The AMA supports insurance coverage for psychiatric care on a parity with general medical, surgical and obstetrical services.

13. *Aetna Advertising:* The AMA met with Aetna Life and Casualty representatives to object to recent Aetna advertising on the cost of health care. . . . Also, the AMA has recently inaugurated a substantial program to convey the positive accomplishments in medicine and health care to the American public (cost about $750,000).

14. *Certificate-Of-Need for Physicians' Offices:* The House of Delegates adopted this resolution: "The AMA be prepared to join with any state medical society, at its request, that commences appropriate legal action challenging a state CON that includes physicians' offices in that state."

15. *AMA Comprehensive Health Insurance Plan: The House again endorsed the AMA's Plan.*

At this convention, nine resolutions, as well as reports of the Board of Trustees and the Council on Medical Service, were introduced. This time discussion was shorter, there was less rhetoric, there was little new, and the majority vote was greater (176 to 46).

The delegations from Illinois, Indiana, Nebraska, South Carolina, and Texas joined the Louisiana delegation in opposing any such national comprehensive bill by the AMA.

16. *Primary Responsibility for Hospitalized Patients: Resolutions asking the AMA to reaffirm the policy that each hospital patient be under the primary responsibility and care of a physician was not adopted because it would "impose a restraint on the practice of dentists and podiatrists who are licensed by law to provide direct and independent patient care services."*

The Board of Trustees on advice of legal counsel stated that dentists and podiatrists are entitled by the laws of their state to provide direct and independent patient care in accordance with the applicable licensure laws without having all their patients under the continued care of a physician.

The principle is this: "Patient admitted to a hospital for services by a dentist or podiatrist should receive the same basic medical appraisal, consistent with the standard of care and the nature of the treatment to be provided, as patients admitted for other services to the hospital."

17. *The Judicial Council Introduced a New Version of the Principles of Medical Ethics (Adopted in 1957) to be Acted on in the Next Convention.* The new version has been published in *Connecticut Medicine.* The Council has discussed it and will make recommendations.

18. *The Judicial Council and the Council on Medical Service issued an important and definitive document on "Confidentiality of Computerized Patient Information."* (This is available to anyone on writing to the AMA.)

19. *Mandatory Patient Package Inserts for Drugs:* Whereas at the last meeting the House "opposed mandatory PPIs for all drugs," it now stated that it is the prerogative of physicians to determine whether a patient receives an information leaflet with his prescription drugs.

The House recommended that PPIs should not be developed unilaterally by the federal government, but should represent a cooperative effort by the major organizations of medicine and pharmacy.

20. *Accreditation of Continuing Medical Education:* Whereas the House of Delegates would like to have state medical associations recognized as the sole and exclusive agency for CME accreditation in those states wishing to do so, it is the Liaison Committee on Continuing Medical Education that is now the single accrediting body in the U.S. in the field of CME. Members of state medical association education committees do serve on the LCCME Review Committee, and this committee recognizes the important role of each state medical society in the accreditation process. The LCCME does promote liaison and cooperation between it and the various CME committees of state medical associations.

21. *Fallacy of Physician Recertification:* This resolution expressed concern with compulsory relicensure and recertification, against which the House reiterated its opposition.

22. *Third Party Carrier Discrimination Against "Non-Participating" Physicians.*

A report of the Board of Trustees dealt with deteriorating relationships between physicians and Blue Shield/Blue Cross plans. Some plans throughout the country make differential payments for the services of participating and nonparticipating physicians. The House adopted two resolutions:

That the AMA oppose third-party differentiation between covered services provided by participating and nonparticipating physicians as discriminatory against the physician who does not have a separate contractual relationship with the carrier and inhibiting the patient's free choice of physician; also

That this position be communicated to all health insurance carriers.

23. *Utilization Review by Third Parties.* If utilization review of hospital patients in the "private" sector is done by third-party payers and bypasses local physician review mechanisms, the AMA "favors the use of local physician review mechanisms in third-party utilization review activities."

24. *Inappropriate Restrictions on the Use of Medical Assistants.*

In response to any state legislation which would arbitrarily restrict the role of allied health personnel, the House of Delegates resolved that "provisions in state legislation which prohibit the performance by allied health personnel, working as assistants to and under the direction, control, and responsibility of the physician, of acts the delegation of which is consistent with good medical practice, improperly restrict the ability of the physician to use effectively such personnel in patient care" be opposed.

25. *Health Planning* . . . The House passed a resolution that the AMA, "through all appropriate means, provide assistance to constituent and component medical societies in attaining appropriate physician participation in, influence on, and leadership of state and local health planning efforts."

26. *National Guidelines for Health Planning.*

The AMA strongly opposed the substance and procedure of the published Guidelines, in the Federal Register, September 1977, and supports the principle that the local and regional Health Systems Agencies with their indigenous problems establish their own criteria for medical facilities. Further, federal regulations should be based on local criteria.

27. *Education Concerning the Economics of Health Care*—Two resolutions, including one by the Student Section, recommended education of medical students, resident physicians, and physicians in practice on the costs of medical care. The House also recommended, through its representatives on the Liaison Committee on Medical Education, to encourage all medical schools to institute or augment such educational programs. It also advises such programs for graduate education and CME.

28. *One Year of Postgraduate Education in the Broad Field of Medicine.*

The Council on Medical Education is undertaking a study to assure the availability of an adequate breadth of clinical experience for physicians about to enter more limited specialties. There seems to be a growing interest in and consideration of the principles behind the old rotating internship in preparation for specialties.

29. *Guidelines for Physicians Attending Patients in Long-Term Care Facilities.*

The House accepted a report of the Council on Medical Service with some amendments that contain 22 suggested guidelines to clarify the role of attending physicians in long-term care facilities—and to help them achieve high quality care for their patients and to assist them in developing policies affecting patient care. (This amended report is available at the AMA.)

30. *Liability of Hospital Medical Staff Physicians for Obligatory Services Rendered as the Agent of a Hospital Corporation.*

A resolution requested that the AMA seek immediate modification in hospital accreditation standards that unnecessarily expose the hospital medical staff physician to personal medical liability in performing services as an agent of the hospital. It was adopted.

31. *Marihuana*—The House adopted, with amendments, a report of the Council on Scientific Affairs on the health aspect of marihuana use including the legal status of marihuana.

The President's Page

The Medical Society and Politics: III

In this third essay I shall be more critical about the political functioning of our medical societies. Our democracy and openness are at once our greatest weakness and our greatest strength. Confidentiality is so hard to maintain that our opponents seem often to know the results of our decision making processes before our members do. We do not have a rapid response-time to initiatives which are constantly being made by others. So your leadership too often has to try to speak in your name and to do so accurately.

But our open system has its glories. I took my concern about the potential dangers in applications of Cost Benefit Analysis to health care to our Council, the AMA delegation and to the House of Delegates of the AMA in just a little over six months. And I cannot find a thing to criticize. Nor could it have been a faster process. Our members who complain of unresponsiveness and slowness should absorb this lesson and learn to use the system better.

Another major weakness is the apathy of a too large number of our members. For various reasons, good and bad, many of you choose not to participate in either the intellectual or the procedural functions of your societies. Sharply critical of organized medicine in private, you are very shy in public. Moreover, you are totally unwilling to donate any time or effort in committee work and services in official capacities, let alone the assumption of leadership roles. A resultant static and unrepresentative leadership could well be your own fault. Perhaps it is being chosen from the smaller group of the willing and available rather than the larger one including yourselves but who are unwilling and unavailable, though it may well be, more gifted.

I think you have not always selected your leaders well. They should be able to communicate fluently both verbally and through the printed word. They must not just be knowledgeable in social, political and economic affairs but must have a professional competence and personal character that reflect credit on you. Diligence in serving you should be matched by willingness to listen to you and by a concern for the people of Connecticut. No leader should ever be chosen who approaches legislators, bureaucrats or any other group with whom we deal with the attitude that their motives are any the less pure than ours or their honesty any the less than ours. And your leaders should have an almost religious respect for your rights and for parliamentary and democratic processes in general.

I shall close by asking you if, indeed, you have fulfilled your responsibilities and duties to your colleagues, your professional ancestors who left you so much and to your professional descendants. And will you leave them a profession as honored and proud as you found it? There is nothing intrinsically bad about politics—only about citizens who don't exercise their power responsibly and politicians who exercise theirs irresponsibly. It is time each of you realized and faced up to the fact that politics is determining the practice of medicine more and more each year. What is needed from you is not less but more and better politics, and more participation in state and county affairs and in the AMA.

Jerome K. Freedman, M.D.
President

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Reflections from the Dean's Office
Curriculum Tampering and Basic Change

ROBERT U. MASSEY, M.D.

Almost everyone has something to say about education. Editorial writers, concerned with the decline of the language, have long been critical of public school teaching, and now agree with our faculties that even prestigious universities have done little to remedy this.

Educational reform of a fundamental nature is infrequent and follows generally upon great social changes. Tampering with the curriculum is another matter, and is more or less continuous. It is especially prevalent in medical schools and in the elementary grades where there are curricula to tamper with. It has to do more with style than with substance.

Fundamental change, however, may be behind the present tamperings, and not only because Harvard is reviewing its undergraduate requirements, or because the number of eighteen year-olds is declining, or because support for education is weakening. All of these things are helping change to happen now, but behind that change are questions that have to do with the basic ideas of Western culture, and whether values are objectively true, or whether notions of goodness and beauty are only feelings. There is a philosophical issue, a debate in the intellectual world which has grown especially during our troubled century, and which now appears to have a practical significance that many have always claimed for it.

Mortimer Adler wrote in his autobiography about the subjectivity of values, and how, in 1940, it led sensitive men to strange conclusions:[1]

"On one occasion last spring an eminent professor of history at the University took the position in an after-dinner conversation that, while he didn't *like* Hitler, no one could *prove* that he was wrong." Adler had written an article that year for *Harper's Magazine*, in which he noted that students at the University of Chicago believed "emphatically and almost unanimously that 'there is no right and wrong' and that 'moral values are private opinions' and that 'everything is relative'."

That generation, which grew up in the skepticism of the decades between the wars, now faces the proposition that, if values are matters of feeling, then issues of value may be resolved finally only by force. Our concern for human rights becomes a matter of excess of sentimentality, and the claims of democracy against tyranny a question of cultural bias.

In the Middle Ages the seven liberal arts were divided into the *trivium*, which included grammar, rhetoric, and logic, and the *quadrivium*, including arithmetic, geometry, astronomy and music. Then as now knowledge rested upon words and numbers, upon analysing by argument, grammar, and logic, or by observing, measuring, and calculating. Our generation thinks of matters related to the *trivium* as trivial; our forefathers believed that once a thing had been proved logically, providing the assumptions were correct, it was true for everyone, and not just relatively. Claude Bernard, who insisted upon the same scientific method for physiology that had been so productive in the physical sciences, wrote that, "Subjective truths are those flowing from principles of which the mind is conscious, and which bring it the sensation of absolute and necessary evidence. The greatest truths, indeed, are at bottom simply a feeling in our mind; that is what Descartes meant by his famous aphorism."[2]

Western civilization is coming to the end of a century in which wars, revolutions, and technologic change have begun to undo its framework. At least, that is the way it seems from this point of shortened perspective.

I once took a picture of the railway station in the little town of Trois Vierges in Luxembourg. It was here that the Germans crossed the border at 7:00 AM on August 2, 1914, seized the railway station, and opened the first round of a War that was to turn the world upside down.

The world is not suddenly coming right side up again. But the question of the relativity of values, or the subjectivity of knowledge other than science, was not settled by the generation which grew up after the Great War. Mortimer Adler debated Bertrand Russell in 1941 on the question "Is science by itself—without philosophy—enough, either theoretically or practically, to guide us in leading good human lives or to lay the foundations of a good society." Lord Russell thought it was, but then went on to concede that we needed something more than science to make value judgments, but thought that the something more was only a feeling. The Western world, sensing autumn in the air, is seeking to rediscover or reaffirm its essential values. The educational reforms are a sign of that great effort; the change will not be marked by a single event or by a single curriculum reform, but the direction taken will be terribly clear to the historians of some future century.

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ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut School of Medicine, Farmington.

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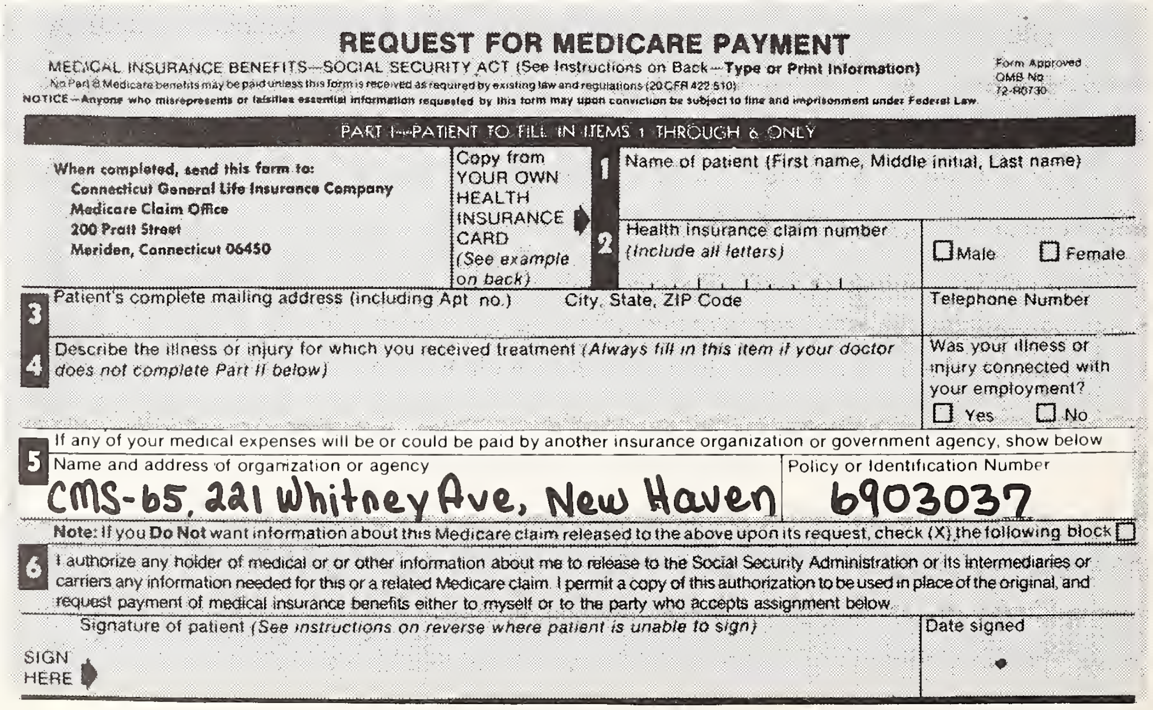

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No Part B Medicare benefits may be paid unless this form is received as required by existing law and regulations (20 CFR 422.510).

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OMB No.
72-R0730

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Copy from YOUR OWN HEALTH INSURANCE CARD *(See example on back)*

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2 Health insurance claim number *(Include all letters)*

☐ Male ☐ Female

3 Patient's complete mailing address (including Apt. no.) City, State, ZIP Code

Telephone Number

4 Describe the illness or injury for which you received treatment *(Always fill in this item if your doctor does not complete Part II below)*

Was your illness or injury connected with your employment? ☐ Yes ☐ No

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Policy or Identification Number: 6903037

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EDITORIALS

Vascular Surgery, 1978

This edition of *Connecticut Medicine* is largely devoted to papers presented at the First Annual Yale Seminar on Vascular Disease. A quick look at the list of authors who have contributed to this edition reads like a "Who's Who" of vascular surgery. Certainly we were able to attract a group of outstanding authorities in the field of vascular disease and their contributions, which are compiled here, are certainly a collection of comments and opinions related to the most modern approaches in vascular medicine and surgery today. While practical vascular surgery has only been around approximately 25 years, the advances that have been made over this relatively short period of time have been truly phenomenal. At the present time, most every artery with occlusive or aneurysmal disease involving most every organ system is surgically correctable at a very slight risk to the patient. This has recently expanded to include occlusive vascular disease of even the intracranial vessels.

The developments in coronary artery bypass surgery have provided the stimulus for successful small vessel surgery of the extremities such as in a rare patient who presents with a viable extremity that cannot be salvaged by modern bypass surgery even into the small vessels of the foot. The one area that remains to be developed is that of small vessel prostheses. While large vessel prostheses constructed of Teflon and Dacron have been extremely successful and available for at least 20 years, there remains a significant lag in the development of synthetic prostheses that will function for extended periods of time when dealing with vessels of two or three millimeters in diameter. While there are many reasons to explain the failure of synthetic materials when dealing with small vessel anastomosis, it is apparent that there is no synthetic material which will give the long-term results of the autogenous saphenous vein. This then remains the real challenge of the future in the management of small vessel disease. There is currently a tremendous amount of research work being carried on in many institutions in an effort to develop some form of prosthetic material which will provide the vascular surgeon with a readily available arterial substitute that can be stored in the operating room shelf, available for bypassing long segments of small arteries and yet have the patency rate that we have become accustomed to utilizing the autogenous saphenous vein. The many reasons for failure of the available synthetic materials are not within the scope of this editorial. If one, however, were to become idealistic, the real hope for the future lies in the area of preventive medicine. Great strides have been made in the management of occlusive vascular disease, however, it remains one of the major diseases of mankind today. While surgical management of vascular disease has evolved to the point that practically every arterial lesion can be corrected, it is clear that these are only palliative inasmuch as the atherosclerotic process will continue or indeed is often accelerated in the reconstructed vascular bed.

Therefore, it is clear that the real need for mankind is the development of some approach to preventative medicine wherein the atherosclerotic process can be slowed down or even, hopefully, stopped. Then, the eminent authorities who have described the truly dramatic advances in vascular disease in this edition of Connecticut Medicine might, hopefully, pursue some other problem of mankind.

H. C. Stansel, Jr., M.D.

Unity in the Profession

One of the most important and historic changes in the organization of the AMA was adopted at its last meeting. It gives national specialty organizations a direct input into the AMA by electing their delegates to the AMA House of Delegates. It will promote unity in our profession. For years the House has rejected many reports on this proposition. Opponents have prevailed, their contention being that the structure of the AMA as a federation based on county and state organizations permits specialists to participate at grass-roots level if they wish. However, the forces for bringing specialty organizations under the AMA umbrella have been increasing during the last few years.

The national specialty organizations of late also have changed their thinking. Confronted with increasing intrusion of the federal government into medical and health affairs, they have opted for unity in the profession by joining the AMA to permit one voice to speak for the profession. They have chosen to concentrate their own efforts on scientific issues, letting the AMA handle social, economic, governmental, and political issues with input and participation through their elected representatives in the AMA.

These organizations, including the various colleges, academies, and societies, 48 at this stage, will each elect its own delegate to the AMA House of Delegates to act as liaison between individual associations and the AMA. This will enlarge the House of Delegates to 265, 48 (18%) of whom will be delegates of national associations. It is difficult to overestimate the importance of this organizational change, probably the most important since the AMA was founded over a century ago.

Another factor promoting unity is the growing strength and commitment of the Section of Interns and Residents which, after much soul-searching in its formative years, decided to function within the AMA. It has increased its membership from about 5,600 in 1974, to 10,500 in 1976, to 13,500 in 1977, and an estimated 16,000 in 1978. These young physicians are active, articulate, responsible and concerned; their influence in the AMA is increasing constantly. The House itself has leaned over backwards to facilitate their input by giving them important committee assignments, the Council on Medical Education as an example.

The American Medical Student Association (AMSA) and the Section of Medical Schools, established in 1976, each has a delegate in the House of Delegates. Their influence in the House is far greater than their single votes.

With the increasing intrusion of federal government into medical and health issues, and with the broadening of organizations in the AMA, we physicians must expect that it will be more difficult for our AMA elected leaders to reach consensus on important issues. While scientific problems lend themselves to rational and logical analysis, social and political issues do not. They carry with them deeply held, diverse, and intensely emotional differences of opinion. Though physicians are bound by the common ties of their profession, we must recognize that they differ in nonscientific issues. Though we all share a deep distrust of Big Government, we should expect the same diversity of opinion on many issues in the AMA House of Delegates as exists in the U.S. Senate, the most apt analogy I know of. However, the mechanism of representative democracy of our political system exists in the organization of the AMA for input from this diversity of opinion. Even the lone delegate can introduce resolutions, some potentially of great importance. All reports and resolutions receive a full hearing before Reference Committees, open not only to the delegates, but to the profession at large and even to the press. After such hearings the House of Delegates in open session finally acts on all recommendations to such resolutions and reports by the Reference Committees.

So whereas the inclusion of the national specialty societies into the AMA, structured on county and state associations promotes unity in the profession, we must expect less unanimity and more majority decisions. This should be considered a strength, not a weakness of the AMA. We must realize this: that final decisions in the AMA will be arrived at in the best tradition of our American democratic process.

Fred Fabro, M.D.

Letters to the Editor

Letters to the Editor are welcomed and will be published, if found suitable, as space permits. Like other material submitted for publication, they must be typewritten *double spaced* (including references), must not exceed 1½ pages in length and will be subject to editing and possible abridgment.

PODIATRIC HOSPITAL PRIVILEGES

To the Editor: The timely presentation of factual information relative to hospital podiatric surgical privileges in *Connecticut Medicine* May 1978 is most welcome.

Only through positive communications can the podiatric and medical professions work together to bring quality medical and surgical care to our patients.

With qualified podiatric surgeons being accorded hospital surgical privileges in Connecticut, interdisciplinary cooperation is of the utmost importance.

Jeffrey F. Yale
Doctor of Podiatric Medicine

Ansonia, CT

MORE ABOUT MAMMOGRAPHY

To the Editor: May I add to the excellent letter of Drs. Tracey, Bradley and Pool in the May issue of *Connecticut Medicine,* p. 339, the following comment:

A very important indication for mammography, which is still frequently disregarded by surgeons is that all women over 35 who are to have breast surgery, should have preoperative mammography.

If the mass which is to be removed is equivocal clinically, mammography may help evaluate it more accurately preoperatively. Even more important, mammography may demonstrate another unsuspected malignancy in the same or in the opposite breast. It is tragic to remove a benign tumor and leave a malignancy behind.

If the mass to be removed is obviously malignant clinically, again mammography can help to define the extent of the malignancy, may demonstrate whether or not there are multifocal malignancies in the same breast and may demonstrate an unsuspected malignancy in the opposite breast.

Certainly if lumpectomy followed by radiation therapy is contemplated a preoperative mammogram is essential.

Dorothea R. Peck, M.D.

Associate Clinical Professor
Department of Diagnostic Radiology
Yale University School of Medicine

The above letter was referred to Drs. Bradley and Pool who offer the following replies:

To the Editor: The interest shown by Dr. Dorothea R. Peck in her current communication referring to our previous letter to the Editor is gratifying. Some discussion is indicated.

Her argument that preoperative mammography may help evaluate a clinically equivocal mass more accurately tends to nullify the emphasis in our Paragraph 4. Such "evaluation" might tend to dissuade the physician from proceeding with biopsy by creating a false sense of security.

"It is tragic to remove a benign tumor and leave a malignancy behind." It is just as tragic to leave a malignancy in place when no benign tumor is removed. In other words, mammography at such a time is essentially a screening procedure whether or not a benign tumor is being removed.

On the other hand, if a mass is malignant clinically or on biopsy, that patient becomes a high risk individual and mammography of the opposite breast is certainly indicated. For such a purpose preoperative mammography seems reasonable. It might also permit operative investigation of a mammographically suspicious area in the opposite breast under the same anesthetic.

Dr. Peck introduces the question of lumpectomy—a highly controversial subject. Until well designed and carefully controlled studies have established equal efficacy of this procedure, it might be well to reserve it for those few women who despite full presentation absolutely refuse mastectomy.

E. Tremain Bradley, M.D.

Cancer Coordinating Committee
Norwalk Hospital
Norwalk, CT

To the Editor: In the first instance Dr. Dorothea R. Peck's addendum to our letter is perfectly correct. Breast cancer carries a six to fourteen percent chance of simultaneous bilaterality whether the initial lesion was first noted physically or by mammography. Therefore any surgeon planning breast biopsy with the suspicion of cancer is well advised to know the mammographic configuration of the opposite breast.

On the other hand neither mammography nor physical examination can be relied upon to identify the full extent of cancer within a breast. Here is a fact that favors total mastectomy over lumpectomy as the minimal procedure to be used for the local eradication of histologically diagnosed breast cancer.

The present day abilities of plastic surgeons to provide after total mastectomy very acceptable breast reconstruction, including the nipple, makes lesser breast procedures for cancer unwarranted.

John L. Pool, M.D.

Medical Affairs Committee
Southern Fairfield Branch
American Cancer Society
Fairfield, CT.

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Summary of Actions
Council Meeting

Thursday, June 1, 1978

I. Attendance

Present were: Drs. Freedman, Kamens, James, Backhus, Spitz, Grendon, Ragland, Jr., Friedberg, Bradley, Canzonetti, Cramer, McGarry, Sadowski. Anderson, Magram, Eslami, Krinsky, Whalen, Rosenthal, Horrax, Shenker, Parrella, Tierney and Shepard.

Also present: Mrs. Wirth, Mrs. Harris, Mrs. Lindquist, Mr. Sweeney, Mr. Brunell and Mr. Norbeck.

Absent were: Drs. Hess, Fabro, Van Syckle, Zlotsky, Jameson, Beck, Harkins, Barrett and Sonnen.

Organizational Meeting

The organizational meeting of the Council for 1978-79 was called to order by the President, Jerome K. Freedman. Following some opening remarks and the introduction of Council members, elections of a Chairman and a Vice-Chairman of the Council for 1978-79 were held. Those elected: Chairman—David A. Grendon, Sharon; Vice-Chairman—Andrew J. Canzonetti, Waterbury.

II. Routine Business

Approval of Minutes

Note was made that the published minutes of the meeting of March 29, 1978, had been approved at the House of Delegates meeting on May 3, 1978, as part of the "Report of the Council."

Life Memberships

It was VOTED to approve applications for Life Membership received from the following eligible Active Members:

Mario J. Albamonti, Norwich (NL)—1/1/78
Marcel A. Azar, Danbury (F)—1/1/79
Laszlo Csovanyos, E. Norwalk—1/1/79
Clarence D. Davis, San Diego, CA (NH)—1/1/78
Benjamin Epstein, Danbury (F)—1/1/78
John H. Grossman, Bridgeport (F)—1/1/79
John B. Gulash, Bridgeport (F)—1/1/78
H. Patterson Harris, Jr., Southport (F)—1/1/78
John E. Harty, Waterbury (NH)—1/1/78
Harold T. Klein, Stamford (F)—1/1/79
Daniel M. Massey, Devon (F)—1/1/79
Marvin Mogil, New Haven (NH)—1/1/78
Eric G. Norrington, Norwalk (F)—1/1/78
Joseph J. Pagliaro, Shelton (F)—1/1/79
Thomas J. Pascal, Bridgeport (F)—1/1/78

Election of Student Member

It was VOTED to elect to Student Membership the following Connecticut resident who is enrolled in a U.S. medical school:

Michael Barry Teiger, West Hartford, CT
University of Connecticut—Class of 1978

Date of Next Meeting

The Chairman set the date of the next Council meeting for Wednesday, August 2, 1978, at 1:30 P.M.

III. Old, New and Special Business

Appointments, Resignations, Etc.

(a) *Appointments to the Board of Examiners of Hypertrichologists:* It was VOTED to recommend the appointments of Drs. Lawrence M. Blum, Fairfield, and Haskell Rosenbaum, Waterbury, to the Board of Examiners of Hypertrichologists for three year terms beginning 7/1/78.

(b) *Appointment to Committee on Emergency Medical Services:* It was VOTED to appoint W. Gordon Van Ness, Chester, to the Committee on Emergency Medical Services.

(c) *Appointment to Connecticut Statewide Professional Standards Review Council:* It was VOTED to appoint Isadore H. Friedberg, Newington, as the CSMS representative to the Review Council for the term of 11/1/78 to 10/31/81.

(d) *Resignation from Judicial Committee:* It was VOTED to accept the resignation submitted by Henry Sherwood and to extend thanks from the Council for his service. It was further VOTED to appoint Merrill B. Rubinow, Manchester, to complete Dr. Sherwood's unexpired term.

Committee on Perinatal Morbidity and Mortality

Following discussion of two resolutions submitted by the subject committee, the following actions were taken:

(a) VOTED to endorse the resolution that: "Services providing termination of pregnancy should not be withheld from medically indigent women. When these same services are available to those women able to pay, either privately or through third party payors, like services should not be denied women on welfare."

(b) VOTED to approve the concept that information regarding the effects of alcohol on the unborn fetus be publicized through the media and in the form of posters and pamphlets. This information could be distributed to hospitals, public health clinics, etc., in cooperation with the Committee on Public Health, Public Relations, Maternal Morbidity, and the Hezekiah Beardsley Chapter of the American Academy of Pediatrics. It was also VOTED to request the committee to study methods for implementation and report back to the Council.

Cancer Coordinating Committee

It was VOTED to approve of the following resolution which had been submitted by the subject committee:

RESOLVED, that third party payers be urged to cover all recognized treatments and tests to control treatments for cancer in out-patient clinics and in private offices on an equitable basis with present hospital coverage, with a view to lowered cost, and that copies be sent to all insurance carriers, the Health Insurance Association of America, Blue Cross, Blue Shield and the Commissioner of Health.

Group Health Insurance Coverage for Office Charges

Having reviewed a letter received from The Aetna Life & Casualty Company pertaining to a request from physicians to amend group health policies to reimburse physicians for office charges as a means of encouraging office surgery, it was VOTED to notify The Aetna of the action taken by the Council on 6/27/72 "that ambulatory care coverage be included in health insurance plans" and CSMS would be interested in pursuing this subject and that the Committee on Peer Review Systems has been designated to discuss this matter with Aetna.

Report of the President

President Freedman reported on a meeting he had held with the new officers of the Society in which recommendations were agreed upon and submitted to the Council for consideration. The report was acted on as follows:

1. It was VOTED that the Fiscal Subcommittee should have the authority to spend up to $500 with the Council merely approving of the Fiscal Subcommittee's report, unless a Councilor wishes to single out one item for discussion.
2. It was VOTED that the Executive Director should have the authority to approve life and student memberships and that staff should formulate appropriate Bylaw change to submit to the House of Delegates.
3. It was VOTED to authorize the President to make appointments to committees or to a statewide organization seeking a CSMS representative, unless they are of a major nature.
4. It was VOTED that our representatives to outside organizations should report in writing in advance for inclusion in the Council Agenda and give verbal reports only when necessary by virtue of a time constraint, the development of an emergency situation, or if there is a matter of confidentiality.
5. It was VOTED that the Auxiliary should issue its report in writing.
6. It was VOTED that the Council meetings should be held every other month; that they should begin on time, and that the Chair should take action to cut unnecessary debate. It was further VOTED that a vote be taken immediately when it is evident that no one wishes to speak in opposition to a motion. The Council approved of a motion to change the quorum requirement to 1/3 of the member plus one (from the present 1/2 plus one) and instruct the staff to draw up the necessary bylaws change and submit to the Council for review and transmission to the House of Delegates.
7. It was VOTED that the President's Report should appear on the agenda before New Business, and both should fall somewhere near the middle of the agenda in order to allow for ample airing of both subjects.
8. It was VOTED that the Council should provide a fund of $3000 per year in order to send two medical students and four House Staff officers to the AMA or AMA related meetings each year, the funds to be spent at the discretion of the President, and to make this provision a separate budget item in the 1979 Budget.
9. It was VOTED that the Executive Director's Office should be permitted to accept resignations from members of those committees where no replacement is necessary, and committees requiring a replacement will become agenda items. In any case, the Council and the chairman of the affected committee will be notified.

Fiscal Items

(a) *Publication of Public Service Pamphlets:* It was VOTED to authorize the Executive Director's

Office to expend up to $5000 on the publication of five public service pamphlets on the subjects of Food and Nutrition, Alcohol, Smoking, Why Health Care Costs Are Up, and How Your Life Style Affects Your Health.

(b) *Legislative Counsel for the 1979 General Assembly:* It was VOTED to engage the services of Atty. John Pickett at mutually agreed upon terms during the 1979 session of the Connecticut General Assembly.

(c) *Policy Re: Reimbursement of Expenses of President-Elect:* It was VOTED to establish a discretionary fund of $500 to be made available to the President-elect for expenses incurred as the result of holding office and to provide that person with a telephone credit card.

Statement on the Pronouncement of Death

It was VOTED to approve of the following statement pertaining to the pronouncement of death, a policy which had been recommended to the Council by a group comprised of CSMS leaders, the Chief Medical Examiner, representatives of the Department of Health, and County Medical Association leaders:

Preamble

The lack of clarity in the statutes, and a misunderstanding of the functions of a medical examiner occasionally has led to problems involving long delays in the removal of the bodies of deceased persons from their homes. This results in deep distress on the part of the bereaved families, the unnecessary and wasteful use of ambulances, and severe criticism of the profession at large, even though such occurrences are indeed rare.

Policy

1. It is an ethical duty, as well as an obligation of decency and compassion, that a treating physician promptly and personally pronounce the death of a deceased patient when notified that such death has occurred in the home.
2. This obligation to pronounce death promptly in the home likewise extends to a physician covering for the attending doctor.
3. The attending physician, although not strictly defined by law, is understood to be the physician last in attendance within a reasonable period of time preceding death.
4. Completing the Certificate of Death is a separate matter, which is to be expedited within 24 hours of death by the attending physician or his covering physician. The covering physician may clearly indicate on the certificate that he is covering for another physician, and may not have personally treated the deceased.
5. A medical examiner must be called if the death is in one of the categories subject to investigation by the Chief Medical Examiner under Section 19-530. It is not a medical examiner's responsibility to pronounce every death. If the physician arriving at the scene is uncertain as to the cause of death, an Assistant Medical Examiner should be called and the death reported to the Office of the Medical Examiner.
6. The pronouncement of death may not be delegated to non-physicians, nor may it be carried out in absentia, nor may a body be removed from the place of death until pronouncement by the physician.

Reports from Physicians Serving on State and Federal Agencies

Mrs. Dindy Harris, representing the Fairfield County Medical Association, discussed the matter of physician representation on HSA boards and proposed amendments to the National Health Planning and Resources Development Act (PL 93-641) and distributed copies of the letter which the FCMA had directed to the Connecticut Congressional Delegation relating to the issues. Mr. Norbeck reported on the AMA actions on PL 93-641 taken during the past several months. It was VOTED to approve of the FCMA letter, receive the entire report as information and to thank Mrs. Harris for her presentation. CSMS Staff was also requested to communicate with the Connecticut Delegation regarding proposed amendments to PL 93-641.

Privacy Protection Study Commission on the Medical Care Relationship

It was VOTED to refer the recommendations of the Privacy Protection Study Commission to the CSMS Judicial Committee for study and report back to the Council. It was also suggested that the FCMA submit their material on the subject of confidentiality and the collection of patient information to the Judicial Committee.

AMA National Awards and Consultation/Training for Medical Society Speakers

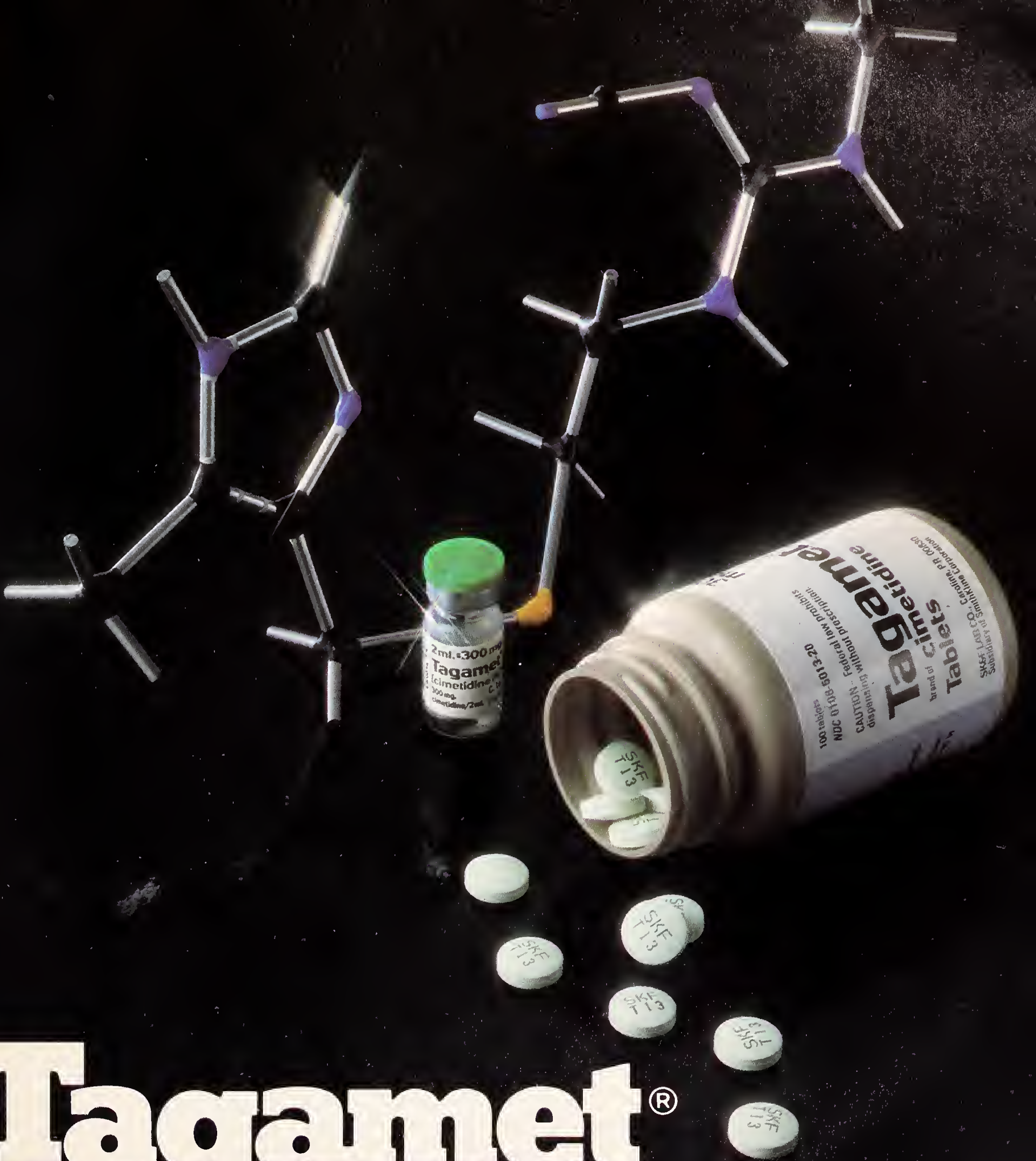
Distributed as information was a notice from the AMA inviting physicians to submit entries to compete for awards in various speaker categories.

Connecticut Approach to the National Voluntary Cost Containment Program

It was VOTED to approve of the following statement of purpose pertaining to the voluntary cost containment program in Connecticut:

1. The Joint Leadership Committee of CHA and CSMS will be designated as the Voluntary Cost Containment committee in Connecticut.

   The Joint Leadership Committee represents the officers and other key physicians within CSMS as well as the Executive Committee of CHA. This committee had met several times and has discussed issues which are of interest to physicians and hospitals including hospital cost containment.



Tagamet®

brand of
cimetidine

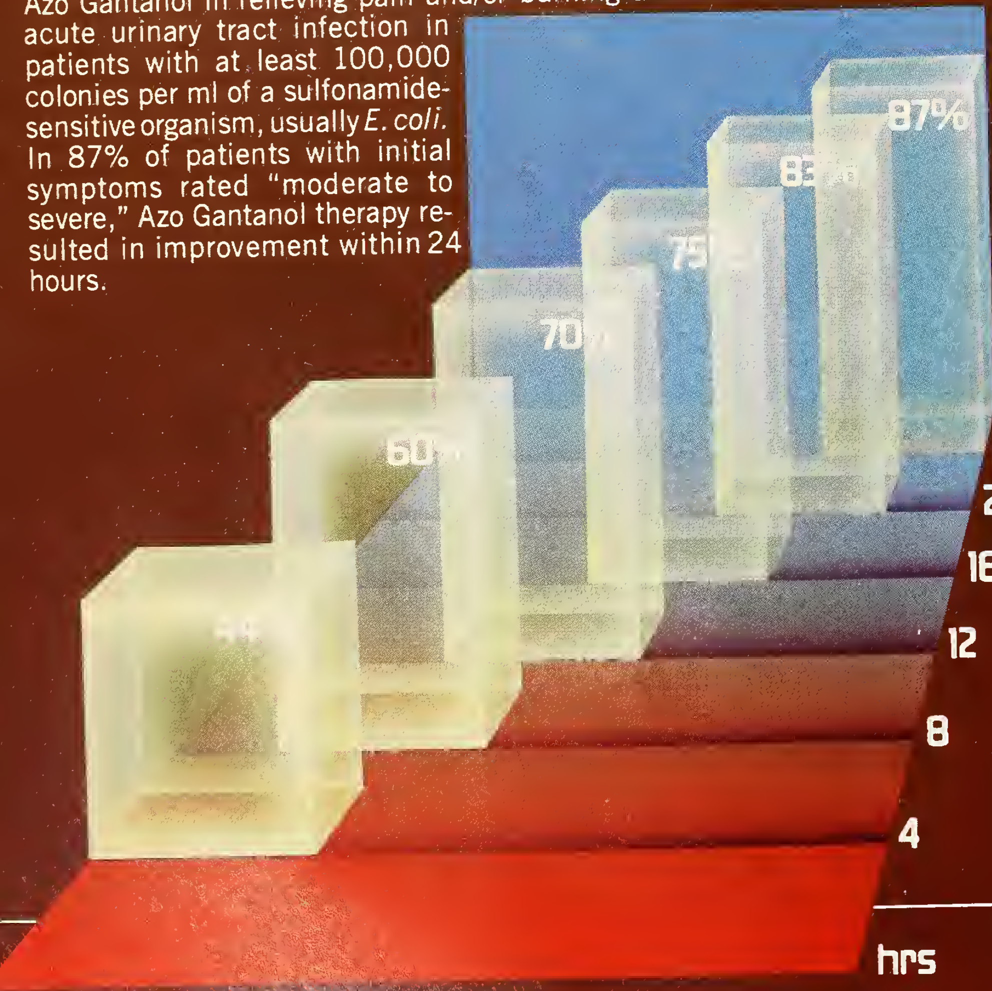
How Supplied: Pale green, 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only). Injection, 300 mg./2 ml., in single-dose vials in packages of 10.

SK&F LAB CO.
a SmithKline company

Important data on the pain of acute cystitis:

In 87% of patients studied [303 of 349], Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli.* In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for the pain

for the pathogens

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not establishe Deaths from hypersensitivity reactions, agranuloc tosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC an urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypopr thrombinemia and methemoglobinemia); *allerg reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis *G.I. reactions* (nausea, emesis, abdominal pains hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, periphe neuritis, mental depression, convulsions, ataxia hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, tox nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hy glycemic agents, sulfonamides have caused ra instances of goiter production, diuresis and hy glycemia. Cross-sensitivity with these agents m exist.

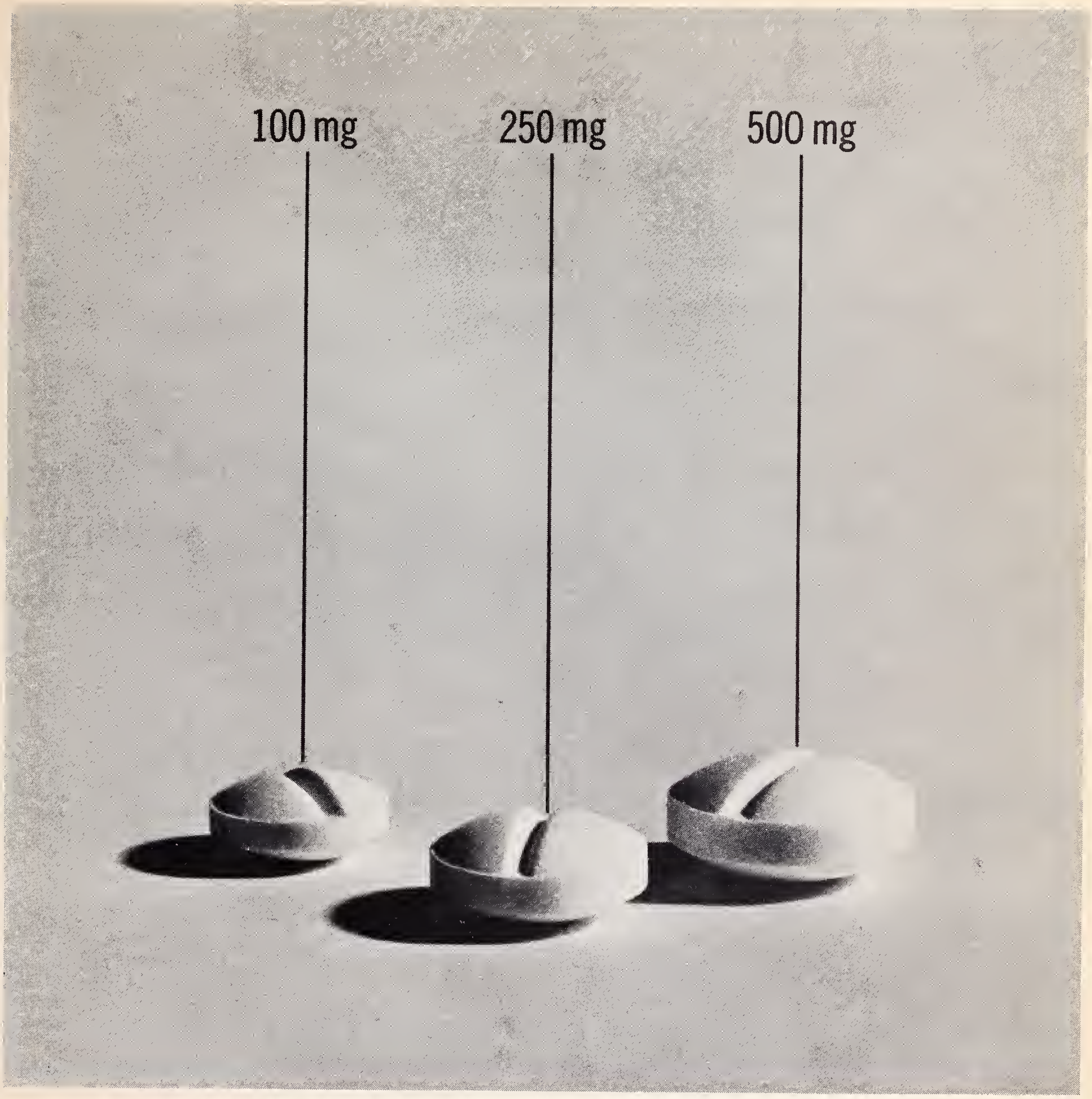
Dosage: Azo Gantanol is intended for the acute painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 G (2 tabs) B.I.D. for up to 3 days. If pain persists causes other than infection should be sought. After relief of pain has been obtained, continu treatment with Gantanol (sulfamethoxazole) m be considered.

NOTE: Patients should be told that the orange- dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each conta ing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche
Nutley, New Jersey 07110



Tolinase®
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Please contact your Upjohn representative for additional product information.

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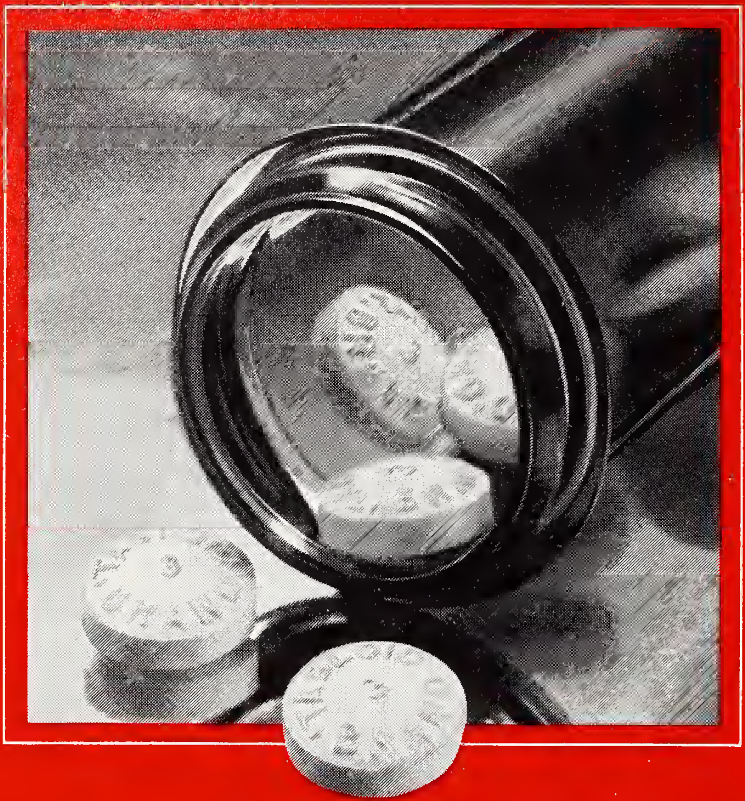

EMPIRIN COMPOUND
c̄ CODEINE

Each tablet contains: aspirin, 227 mg, phenacetin, 162 mg, and caffeine, 32 mg; plus codeine phosphate in one of the following strengths: #4—60 mg (gr 1); #3—30 mg (gr ½), #2—15 mg (gr ¼), and #1—7.5 mg (gr ⅛). (Warning—may be habit forming) CIII

Wellcome
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North Carolina 27709

2. This committee has sponsored a series of seminars on the physicians' role in hospital cost containment. These seminars have promoted the establishment in each hospital of a physician cost containment committee and have also focused on utilization controls in specific ancillary service departments.
3. We believe that Connecticut hospitals and the CSMS are striving to meet the national goals of the voluntary cost containment program. Both the CSMS and CHA shall combine mutually to monitor developments in cost containment. Both CHA and CSMS shall continue their individual and joint efforts at cost containment with the expectation that with our leadership, our members, both hospitals and doctors will have the leadership and stimulus to maintain awareness and participation in cost containment.

Federal Trade Commission Update

Received as information was the report that Judge Barnes was expected to render his opinion by early fall.

Recommendation from Judicial Committee

E. Tremain Bradley, Chairman of the Judicial Committee, reported on his committee's recommendation regarding an inquiry received from Dr. Edward Browne. It was VOTED that the recommended mechanism providing for the physical and/or mental examination of a physician on a hospital staff when this appears indicated be as follows:

The physician should be examined by a doctor of his own choice; to fulfill its responsibilities, the medical staff may additionally mandate examination by one or more other physicians.

Report from Committee on Peer Review Systems

Sidney L. Cramer, Chairman of the Committee on Peer Review Systems, reported briefly on the guidelines for the frequency of trans-telephonic evaluation (TTE) of pacemakers after implantation. It was VOTED to accept the committee report in total and to forward the recommendations to the Medicare Office.

N.B.: *The foregoing is a summary of the proceedings and actions of the Council on June 1, 1978. Detailed minutes of the meetings are on file at 160 St. Ronan Street, New Haven, for perusal by any interested member of the Society.*

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FOR ADULTS AND ADOLESCENTS

ELMCREST PSYCHIATRIC INSTITUTE is a 105-bed private mental health treatment center offering a comprehensive program of diagnostic, consultative, treatment, rehabilitative, and educational services for adults and adolescents. Psychological and emotional disorders are treated within the context of a therapeutic community.

FOR FURTHER INFORMATION CONTACT:

Allen Cohen, M.P.H., M.S.W.
Administrator

Louis B. Fierman, M.D., F.A.P.A.
Medical Director

M. Joan Green, M.D.
Clinical Director

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☐ DRUG, ALCOHOL, AND VOCATIONAL REHABILITATION
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ELMCREST PSYCHIATRIC INSTITUTE
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PORTLAND, CONNECTICUT 06480
Telephone (203) 342-0480

PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiry of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511 (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine* as space permits.

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

Emergency Room: Looking for an experienced primary care physician with ER skills, preferably a graduate of an ER residency program, to join an established 6-MD group in a 350-bed University affiliated full service community hospital with an active emergency room of 45,000 annual visits. Position requires no night duty, has a 45-hour week, offers an attractive salary and liberal employee benefits. Contact: Charles W. Parton, M.D., Director of Ambulatory and Community Medicine, Mt. Sinai Hospital, 500 Blue Hills Avenue, Hartford, CT 06112, 203-242-4431.

Emergency Room: Position available immediately. Fairfield County. Full time ER physician to join established full time department in ultra-modern, university-affiliated teaching hospital experiencing 32,000 visits per annum. Salary negotiable. Professional liability provided. Excellent benefits plan. Send C.V. to Romona M. R. Byard, M.D., Chairman, Department of Emergency Medicine, St. Vincent's Medical Center, 2800 Main Street, Bridgeport, CT 06606.

Doctor wanted to take over well-established FP in Northwestern Ct. Retiring MD will stay on for introducing and consulting. Immediate income. Office fully equipped. Send C.V. to CSMS-IG.

Family Physician leaving for residency. Office centrally located in Centerville section of Hamden, Ct. Equipment and office furniture available, if desired. Contact M. Levenstein, M.D., 2572 Whitney Ave., Hamden, Ct. 06518. 248-6916 or 239-4392.

Internist or GP to assume General Medicine practice in Wilton, Ct. Fully equipped office; chest unit, EKG, no purchase price necessary. Contact V. Tricarico, M.D., 14 Reservoir Ave., Norwalk, Ct. 06856. 846-2906.

Pediatrician wanted in small town in the greater Hartford area. With access to four large hospitals. Physician wishing to retire after 40 years of practice. Office caters to infants, children and adolescents. An immediate interview is possible. Week days between 12:30 and 5:30 except Thursdays. Call 203-243-0737; after hours 243-0743.

PHYSICIANS WISHING TO LOCATE IN CONNECTICUT

ANESTHESIOLOGY

Nov. '78. Age 31. AB-cert. Presently in practice. M.D. from Univ. of Santo Thomas, Phil. Int. at Kenmore Mercy Hosp., NY. Res. at Columbia-Presbyterian Med. Ct., NY. and fellowship at Roosevelt Hosp., NY. Grp. or corporation partnership desired. Contact CSMS-Anes. AC.

July '78. Age 32. AB-elig. M.D. from India. Int. in England. Res. at Brookdale Hosp., NY. Will consider all types of practice in any size community in Conn. Arundev D. Desai, M.D., 7 Hegman Ave., Apt. 17-C, Brooklyn, NY 11212.

ANESTHESIOLOGY—CONTINUED

July '78. Age 34. FLEX. AB-elig. M.D. from Witwatersrand Univ. and int. at Baragwanath Hosp., South Africa. Res.'s at Stanford Univ. and Univ. of London. Wishes grp. practice. Contact CSMS-Anes. LS.

-FAMILY PRACTICE

July '78. Age 41. Conn. license. AB-elig. M.D. from Bombay. Int. at Griffin Hosp., Derby. Res. at St. Raphael's. Presently in practice. Grp. or institutional practice desired. Lakshmi Basu, M.D., 25 Offutt Rd., Bedford, Mass. 01730.

Aug. '78. Age 28. Nat'l bds., elig. M.D. from Philadelphia Coll. of Osteopathic Med. Int. at Metro. Hosp., PA. Res. at Hahneman Med. Coll. & Hosp. Will consider any type of practice in any size community. G.S. Peter Gross, D.O., Parkway House-702, 2201 Penna. Ave., Phila., PA 19130.

Available now. Age 43. MD from Roumania. Wishes institutional type practice in any size community. Marian F. Lupu, M.D., Box 5, Richmond State Hospital, Richmond, Ind. 47374.

July '78. Age 26. Conn. license pending. Reciprocity-Ct. M.D. from the Univ. of Manitoba, int. at McMaster Univ. Hosp., Canada. Grp., assoc. or solo practice desired. Meenaz H. A. Rosool, M.D., #201, 353 Tache Ave., Winnipeg, Manitoba, Canada R2H 3C1.

INTERNAL MEDICINE

July-Aug. '78. Age 31. FLEX. AB-elig. M.D. from Santo Thomas Univ. Int. at Bergen Pines County Hosp., NJ. Res. at St. Clare's Hosp., NY. Grp. or assoc. practice desired in large or med. community in Conn. Kim King Chan, M.D., 425 Goler House Apt., Rochester, NY 14620.

July '78. Age 29. Licensed in Conn. Nat'l. bds., cert. M.D. from Loyola Univ. Stritch Sch. of Med. Int. and res. at Hosp. of St. Raphael's. Fellowship at UConn. Prefers the New Haven area. Ambulatory Care/ER. Contact CSMS-IM. MAD.

July '78. Age 28. Nat'l. bds., elig. 7/78. MD from State Univ. NY-Downstate. Int. and res. at Nassau County Med. Ctr. Grp. or industrial practice in large or med. community. Peggy Geimer, M.D., 39 Arlyn Dr., East, Massapequa, NY 11758.

Hematology-Oncology: July '78. Age 31. Nat'l. bds., cert. M.D., int., res. and fellowship at State Univ. of NY-Downstate Med. Ctr., Kings County Hosp. Grp. or institutional practice in med. or small community. Contact CSMS-IM. DM.

Available now. Age 30. Conn. license. FLEX. AB-cert. M.D. from Univ. of Iowa. Int. and res. at Bridgeport Hosp. Presently in practice. Solo, grp. or assoc. practice in any size community. Contact CSMS-IM-RJR.

Gastroenterology: Available immediately. Age 32. Nat'l. bds., cert. M.D. from NY Univ. Int. and res. at Strong Mem. Hosp., Univ. of Rochester, NY. Fellowship at Peter Bent Brigham Hosp.-Harvard. Grp. or assoc. practice in Conn. Presently in practice as an Assistant Professor of Med. at Univ. of Texas. Contact CSMS-IM. AS.

NEUROLOGY

Available now. Age 35. AB-elig. M.D. from Silesian Sch. of Med. Int. at Booth Mem. Hosp. Res. at NY Univ. and NY Med. Coll. Solo, grp., institutional or industrial practice in large or med. community. Jan J. Golnick, M.D., 4 Park Ave., Apt. 8E, New York, NY 10016.

OBSTETRICS AND GYNECOLOGY

July '78. Age 42. Conn. license. AB-elig. M.D. and int. in Egypt. Res. at Cooper Med. Ct., NJ. Solo, assoc., grp. or institutional practice in med. community in Ct. Yousef S. Banoud, M.D., 162 Sunset Ave., Farmingdale, NY 11735.

July '78. Age 35. Conn. license. AB-elig. M.D. from India. Int. and res. at Stamford Hospital, Ct. Presently House physician at Stamford Hosp. Grp. or assoc. practice desired in Southern Ct. preferably in Fairfield County. Devendra M. Bhardwaj, M.D., 242 Gurdon St., Bridgeport, Ct. 06606.

Available now. Conn. license. Cytopathologist-experienced lab. director in Ct. Certified. Seeking part-time position. Flexible schedule. Contact CSMS-OB/GYN-EO.

OPHTHALMOLOGY

Age 54. AB-elig. M.D. from Rumania. Presently in practice. Will consider general medicine. Grp. or institutional practice. Idel Beer, M.D., 330 West 28th Street, Apt. 3H, New York, NY 10001.

Available immediately. Age 40. Conn. license. Nat'l. bds., cert. M.D. and res. from NJ College of Med. Int. at Martland Hosp., NJ. Presently in practice. Will consider all types of practice in any size community. Theodore J. Krawiec, M.D., 35 Jamestown Road, Somers, Ct. 06071.

July '78. Age 32. Conn. license pending. Nat'l. bds., elig. M.D. from Tufts. Int. at Montefiore Hosp., NY. Res. at Mt. Sinai Hosp., NY. Fellowship in Corneal & External Disease at Estelle Doheny Eye Foundation, Los Angeles, CA. Will consider all types of practice in large community in Ct. Contact CSMS-Oph.-MJN.

ORTHOPEDICS

Available immediately. Age 35. Nat'l. bds., cert. M.D. from George Washington Univ. Int. and res. at St. Vincent's Hosp., also res. at State Univ.-Kings County Hosp., Ctr. Presently in practice. Solo, grp., or assoc. practice in large or med community. DeWitt C. Brown, III, M.D., 1344 Fairacres Rd., Rydal, PA. 19046.

PEDIATRICS

June '78. Age 39. FLEX. AB-cert. M.D. from Iran. Int. at Northwestern Hosp., Minn. Res's. at Norwalk Hosp., Ct. and Univ of Oklahoma. Fellowship at Univ. of Arkansas. Will consider all types of practice in any size community. Abdul H. Darki, M.D., 61 Loveland Hill, Vernon, Ct. 06066.

July '78. Age 30. Nat'l. bds., cert. M.D. from State Univ. of NY-Downstate. Int. and res. at Upstate Med. Ctr., NY also res. at Hahnemann. Fellowship at Univ. of Colo. Med. Ctr. Grp., partnership or loose pediatric back-up situation in small community. Dennis P. Durante, M.D., 3018 Avenue P., Brooklyn, NY 11234.

Available immediately. Age 38. Conn. license. FLEX. AB-cert. M.D., from Hadassah Univ. Int. at Jewish Mem. Hosp., NY. Res. and fellowship at Mt. Sinai, NY. Assoc. and institutional type practice desired in large or med. community. Ben Glassman, M.D., 70 Hawthorne Ave., Yonkers, NY 10701.

July '78. Age 31. Conn. license. AB-elig. M.D. from India. Int. at Southend Gen. Hosp., England. Res. at Med. Coll. of Ohio. Solo or institutional practice in Ct. C.R. Chandra Shekar, M.D., 4727 Willys Parkway, #103, Toledo, O 43612.

July '78. Age 30. Conn. license. AB-elig. M.D. from India. Int. at Civil Hosp., India and Richmond Mem. Hosp., NY. Res's. at St. Vincent's Hosp., Mass. and Waterbury Hosp., Ct. Solo, grp. or assoc. practice. Contact CSMS-PED.-KKV.

RADIOLOGY

July '78. Age 31. Nat'l. bds., cert. MD from Univ. of Southern CA. Int. and res. at L.A. County-USC. Formerly a Ct. resident. Grp. or assoc. practice. Franklin Li, M.D., 3160 Las Lunas St., Pasadena, CA 91107.

SURGERY

General and Vascular: Sept. '78. Age 30. Nat'l. bds., elig. M.D. from Univ. of Minnesota. Int. and res. at Med. Coll. of Wisconsin affiliated Hospitals. Grp. or assoc. type practice in large community in Ct. Contact CSMS-Surg.-GFA.

July '78. Age 31. AB-elig. M.D. from the Univ. of Santo Tomas. Int. at Kenmore Mercy Hosp., NY. Res. and fellowship at Bronx Lebanon Hosp., Ctr. Wishes multi-specialty grp. or partnership in med. community. Amelito P. Canlas, M.D., 385 Wildrose Ave., Bergenfield, NJ 07621.

Gen. & Vascular: July '78. Age 30. Nat'l. bds., elig. MD from Univ. of Illinois. Int. and res. at Strong Mem. Hosp., Univ. of Rochester. Grp. practice in large or med. community desired. Charles E. Paterson, M.D., 169 Shelbourne Rd., Rochester, NY 14620.

Thoracic & Cardiovascular: Available now. Age 35. Nat'l. bds., Am. Bds./cert-Gen. Surg., elig. Thoracic. MD from Med. Coll. of Wisc. Int. and res. at St. Elizabeth's Hosp., Boston. Thoracic res. and fellowship at Temple Univ. Presently in practice. Solo, grp. or assoc. practice. Godfrey C. Pinder, M.D., 12 Carriage Way, Montclair, NJ 07042.

UROLOGY

July '78. Age 32. FLEX. AB-elig. MD from Guadalajara. Int. at Dalhousie. Res.'s at Coll. of Med. at Dent. of NJ and Univ. of CA. Grp. or assoc. practice in med. community. Joel S. Cohen, M.D., 3880 La Jolla Village Dr., La Jolla, CA 92037.

July '78. Age 32. AB-elig. MD from India. Int. at Brooklyn-Cumberland Med. Ctr. Res. and fellowship at Albert Einstein. Will consider all types of practice in med. community. Dharampal Bhuta, M.D., 1935 Eastchester Rd., #3A, Bronx, NY 10461.

July '78. Age 29. Nat'l. bds., elig. MD from SUNY. Int. and res. at Univ. of NC. Pediatric and adult urology training. Special interest in neurogenic bladders and trauma surgery. Solo, grp. or assoc. practice in med. community. Michael C. Magee, M.D., 1543 Ferrell Rd., Chapel Hill, NC 27514.

July '78. Age 33. Elig. MD from NJ. Int. at Passavant Mem. Hosp. Res. and fellowship at Buffalo. Assoc. practice in large or med. community. Steven W. Ross, M.D., 18542 Meadow La., Hazel Crest, IL 60429.

July '78. Age 30. Nat'l. bds., elig. MD from Einstein. Int. at Metropolitan Hosp. and res. at Montefiore and Bronx Municipal. Grp. or assoc. practice in large or med. community. Rodney A. Becher, M.D., 2400 Johnson Ave., Riverdale, NY 10463.

July '78. Age 40. Elig. for Ct. license. Am. Bd./elig. MD from India. Int. and res. at Beth Israel Hosp., NY. Solo, grp. or assoc. practice in med. community. Baikunth N. Bhargava, M.D., 353E 17th St., #21C., NY, NY 10003.

July '78. Age 30. Nat'l. bds., elig. MD from George Washington Univ. Int. at Med. Univ. of S. Carolina. Res. and fellowship at Maimonides Med. Ctr., NY. Solo, grp. or assoc. practice desired. Arthur L. Soben, M.D., 950-49th St., #6F, Brooklyn, NY 11219.

Welcome New Members

WINDHAM COUNTY

Edward J. Collins, Jr., Willimantic
Joseph J. Creme, Thompson
Devdass D. Karmarkar, Thompson
Samuel S. Masters, Willimantic
Richard A. Moriarty, Mansfield Center
Richard P. Snyder, Putnam

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Connecticut Medicine

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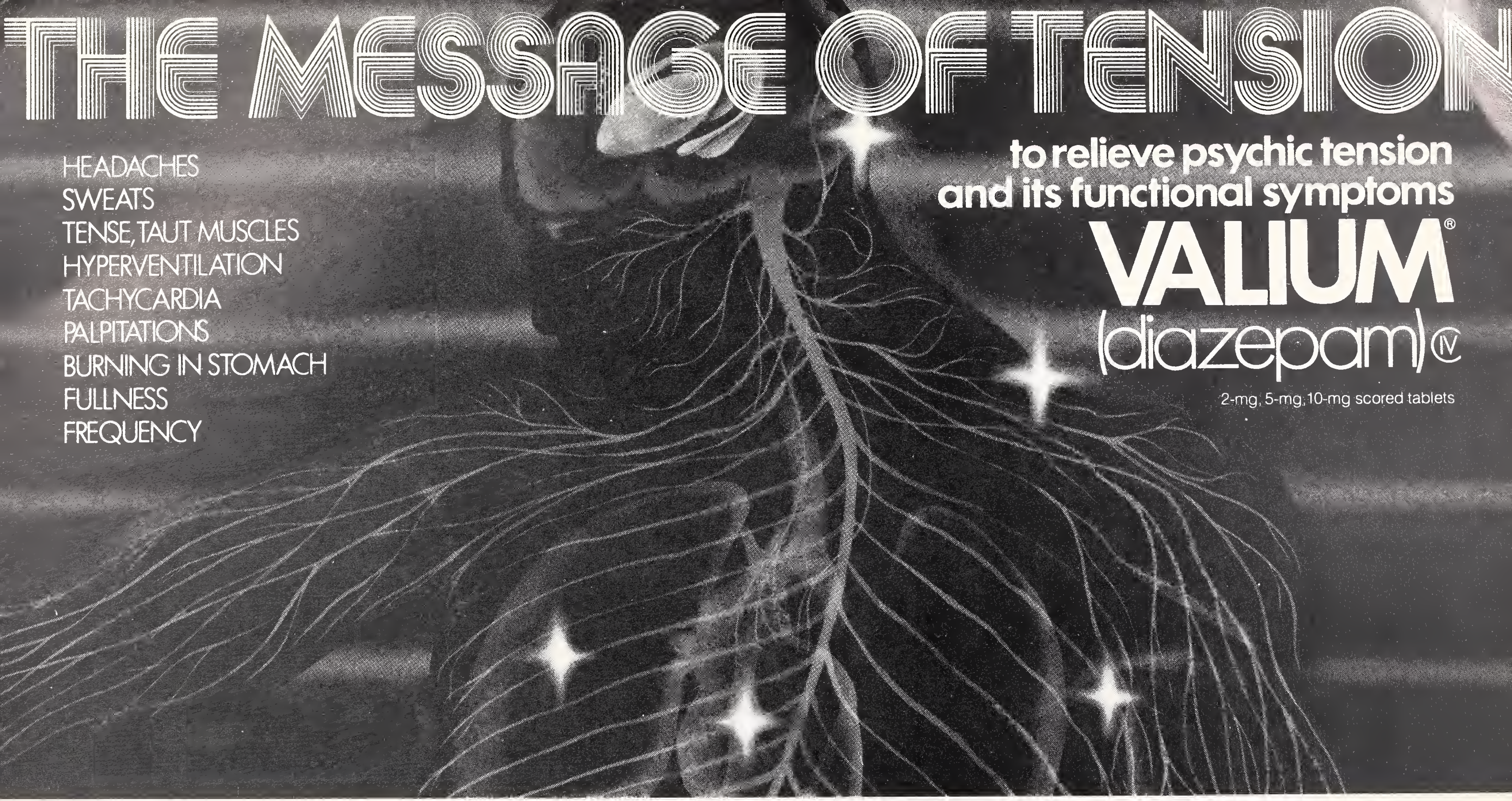

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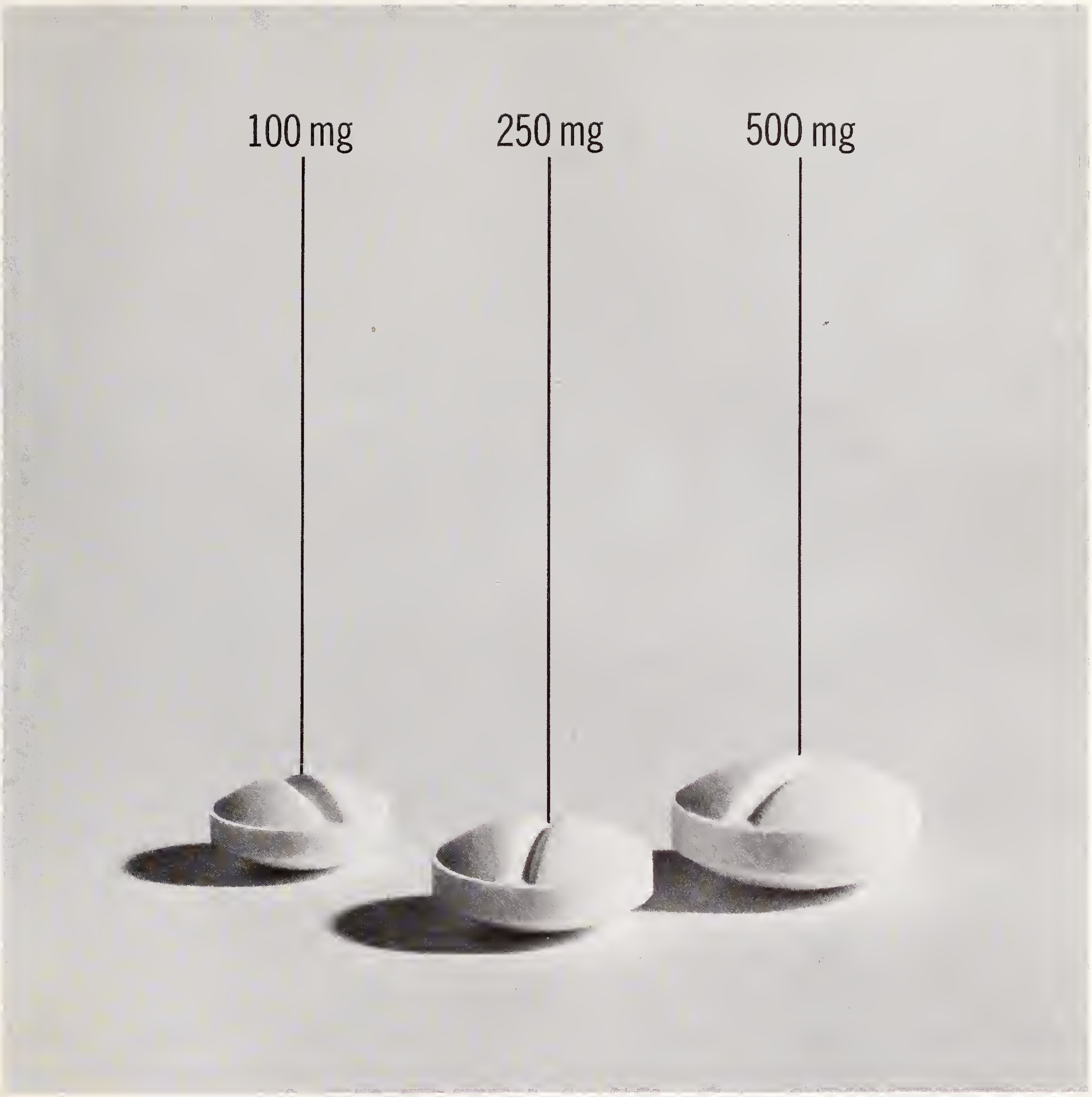

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Then we must consider the fact that there are non-medical costs attached to health care — labor, food, administration — and the biggest economic factor of them all, inflation.

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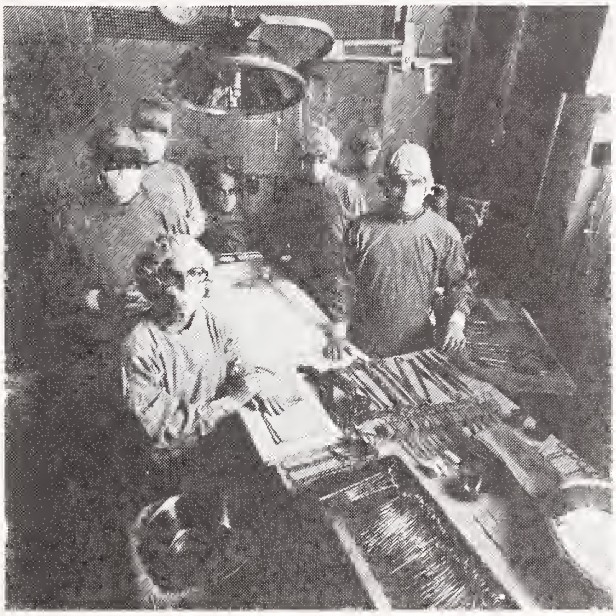

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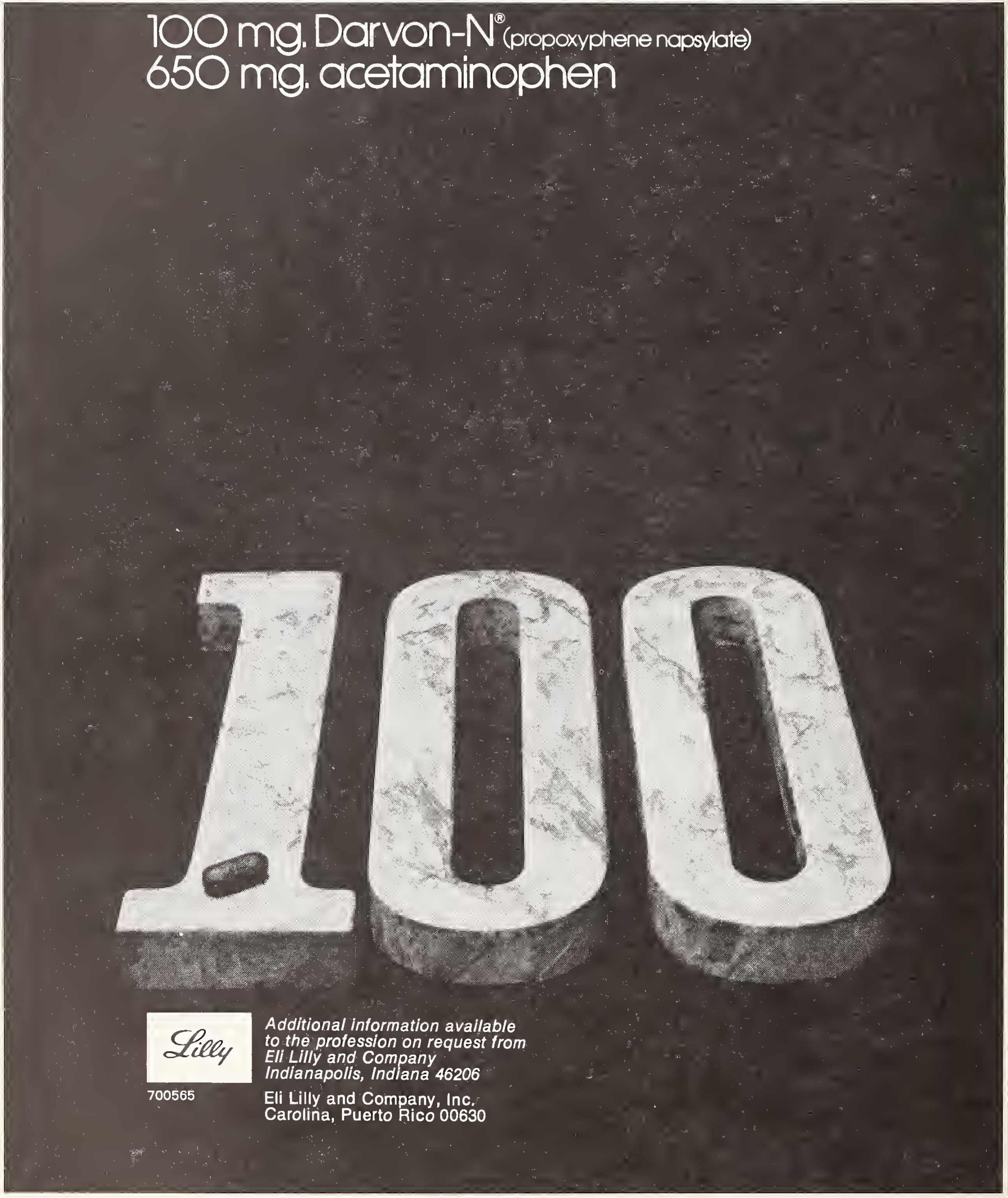

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Tuberculous Peritonitis—A Review of the Literature

MALKANTHIE DESILVA, M.D. AND RICHARD C. TILTON, PH.D.

ABSTRACT—A review of the literature has shown that in contrast with the countries where gastrointestinal tuberculosis is still prevalent, tuberculous peritonitis has been, and still is, one of the rare manifestations of extra pulmonary tuberculosis in the United States.

Tuberculous peritonitis is a disease with protean manifestations. A high index of suspicion is required for its diagnosis. The most useful and significant clinical findings include the presence of rapidly increasing abdominal girth with ascites associated with abdominal pain and fever in a patient with a positive skin test (P.P.D.) for tuberculosis. Demonstration of both an exudative type of ascites with a predominant mononuclear cell response and the characteristic caseating granuloma histologically from a peritoneal aspirate and biopsy respectively are the most useful procedures for the rapid diagnosis of tuberculous peritonitis. The early diagnosis and institution of appropriate therapy, with the excellent antituberculous drugs available at the present time, has greatly improved the morbidity and mortality from tuberculous peritonitis.

Since the advent of effective antituberculous drugs and the control of bovine tuberculosis (TB), TB has ceased to be a major health hazard in the United States. The statistical data collected by the Center for Disease Control (CDC) shows an annual decrease of 2-3% of TB in this country for the last several years. The 33,554 cases for 1975, reported by the CDC, represents an incidence of 15.9 cases/100,000 population. The highest case reporting index for TB is from Hawaii. Connecticut is 38th. Until 1975, the statistics on TB were divided into two major categories: pulmonary TB and extrapulmonary TB. Since 1975, an attempt has been made to further subdivide the extra pulmonary cases of TB. Table 1 shows the incidence of the various categories of extrapulmonary tuberculosis in the United States and specifically in Connecticut.

Table 1

INCIDENCE OF EXTRA PULMONARY TUBERCULOSIS
1975

Category	*U.S.A.*	*Conn.*
Pleural	1071	12
Lymphatic	1032	12
Genito-Urinary	714	12
Bone/Joint	436	5
Miliary	410	5
Meningeal	191	1
Peritoneal	156	0
Other	68	2
Total	4078	49

During the pre-antibiotic era when journals such as the *Tubercle* flourished, the entity of tuberculous peritonitis (TbP) rarely occurred. During the years 1914-1931 Olcott and Pacchione[1] found only 109 cases among 75,000 patients and Kahrs[2] in his study of cases from 1930-1948 identified 169 cases of TbP among 379,600 patients. TbP continues to remain a rare entity.

Pathogenesis of Tuberculous Peritonitis

The route of infection of TbP is unclear. Extension of the tuberculous process from TB of the gastrointestinal tract and/or mesenteric nodes is a significant route in geographic locations where gastrointestinal TB is a common disease. However, ileocecal TB without apparent active pulmonary TB has become for most Western countries decidedly uncommon.

MALKANTHIE DESILVA, M.D., Assistant Professor of Medicine, Department of Medicine; RICHARD C. TILTON, Ph.D., Professor of Laboratory Medicine, Department of Laboratory Medicine, University of Connecticut School of Medicine, Farmington.

Contiguous spread from infected Fallopian tubes has been offered as an explanation to account for the slightly higher preponderance of TbP in females. However, close scrutiny of the literature does not appear to substantiate this theory. In none of the series reviewed was the involvement of the Fallopian tubes demonstrated as a significant source of spread to the peritoneum. In fact, many series clearly stated that the Fallopian tubes were normal.

The most widely accepted hypothesis for the pathogenesis of TbP is that proposed by Nice;[3] namely, that TbP represents a reactivation of a long latent TB focus in the peritoneum. Such focus might have been established years ago due to hematogenous spread from a primary lesion in the lung that subsequently healed. Healing may be so complete as to mask any radiologic evidence of a lung lesion. The peritoneum could also be involved in the process of military TB with widespread dissemination.

Are there any factors, genetic or otherwise, that increase the susceptibility of an individual to TbP? As is true of TB elsewhere in the body, the non-white population is more susceptible. In most series there appears to be a slightly higher incidence in females. There is also a suggestion that pregnancy increases the risk of reactivation of a quiescent TB focus of the genital tract.

The association of cirrhosis with TbP has been described[4 5] and in Osler's era[6] cirrhosis was thought to predispose to TbP.

In the 32 Iranian patients with TbP reported by Borhanmanesh et al,[7] there were no cases of cirrhosis. TbP was not found in another 300 patients with cirrhosis who were prospectively studied in that area, despite an 80% incidence of ascites.

Burack and Hollister[5] reviewed 47 cases of proven TbP when it coexisted with cirrhosis and ascites. In their series, TbP was unsuspected in 55% of the patients with cirrhosis and in only 14% of patients without cirrhosis. Thus, while it is true that the diagnosis of TbP is frequently missed when it occurs in the cirrhotic, cirrhosis per se probably does not predispose to the development of TbP.

Finally, there is the association of TbP and surgery. This has been considered in several reports which have stressed the reactivation of pulmonary TB following gastrectomy. This association was also indicated by Befeler and Baum.[8] Rafoth et al[9] described 4 cases of TbP that occurred following laparotomy performed for non-tuberculous causes. An extensive search of the literature and review of 100 cases in 14 series yielded four more cases of TbP which occurred post-laparotomy for non-tuberculous causes.

The development of post-laparotomy TbP may be related to the mechanical reactivation of quiescent intra-abdominal granulomata, a generalized decrease in cellular immunity, or merely coincidence. Localized non-caseating granulomatous lesions secondary to suture and other foreign material as talc and starch are not unusual after surgery, and could present a source of confusion in diagnosis. Apart from the cultural and/or acid-fast bacillus (AFB) smear confirmation of TB from ascitic fluid and/or peritoneal biopsy, the short incubation period of less than three weeks for the onset of signs and symptoms of post-operative granulomatous peritonitis, (usually a self-limiting process) may help to differentiate it from the long incubation period (usually 4-6 weeks) that occurs before significant signs and symptoms of TbP develop. Since these two entities may cause confusion in diagnosis, it needs to be emphasized that, a) in sterile post-operative peritoneal reactions where starch granules are not seen, b) where there is a longer incubation period than 3 weeks, or, c) when the process is not self-limited, TbP should be carefully considered.

Clinical Features of Tuberculous Peritonitis

Sir William Osler,[10] has stated, "TbP presents a symptom complex of extraordinary diversity." This is the reason why a high index of clinical suspicion is required in order to diagnose TbP. An ideal set of clinical circumstances for the diagnosis of TbP could be the admission of a black female with fever, night sweats, weight loss, weakness, abdominal distension, pain and non-specific gastrointestinal or pelvic symptoms. History might include recent exposure to TB. On examination, pleural effusion and ascites might be found. The skin test for TB would usually be positive. The chest X-ray reveals an infiltrate with pleural effusion. Abdominal paracentesis yields an exudate fluid and the diagnosis is confirmed by demonstrating acid-fast bacilli (AFB) in the serous fluid.

However, such model patients, rarely if ever, exist. Much of the descriptive data on tuberculous peritonitis is obtained from prospective and retrospective studies in countries where TbP still remains a clinically significant problem. Even though rare, it still continues to be encountered in clinical practice, and its diagnosis is obviously important because of its therapeutic implications.

Table 2 summarizes the pertinent clinical finding in TbP that were found in six different series.[5 7 11 12 13 14] With the exception of the series from Boston[5] where the males predominated and no data was provided on the ratio of whites to non-whites, the rest of the series has confirmed that there is an increased susceptibility of non-whites and females to this disease. Fever, abdominal distension due to ascites, and a reactive TB skin test appear to be the features occurring with the greatest frequency. The onset of illness is insidious although rarely rapid enough to mimic an acute surgical abdomen. Night

Table 2

SIGNIFICANT CLINICAL FINDINGS IN TUBERCULOUS PERITONITIS

Location and Year of Study	*Boston (5) 1953-'58*	*Texas (11) 1943-'60*	*Chicago (12) 1953-'63*	*N. Carolina (13) 1957-'66*	*India (14) 1963-'66*	*Iran (7) 1967-'71*
#Patients in study	47	12	31	100	47	32
# Females	21	8	21	63	27	21
# Non Whites	N.R.*	11	27	79	47	32
Abdominal pain	45%	22%	30%	38%	60%	81%
Abdominal swelling	62%	78%	84%	31%	100%	53%
Weight loss	32%	N.R.	N.R.	15%	76%	90%
Fever	100%	41%	100%	3%	100%	96%
Ascites	60%	66%	84%	61%	100%	71%
Reactive skin test of T.B.	N.R.	55%	86%	100%	100%	100%

*N.R. - Not Recorded.

sweats, enlarged lymph nodes, palpable abdominal masses, gastrointestinal disturbances such as anorexia, nausea, vomiting, and altered bowel habits, are some of the other less frequently noted signs and symptoms. In these series, a positive skin test for TB was a constant finding. However, this may not always be true. The most common circumstance in which a negative skin test occurs would be in the anergic state found in the critically ill patient with disseminated TB. Malnutrition and high fevers, particularly with viremia, are other situations causing a transient anergic state. Johnston and Sanford[11] postulated the following sequence: A tuberculin-positive patient inoculates his peritoneal cavity with AFB and/or their products which results in the rapid development of ascites and a constitutional tuberculin reaction, including fever and rigors. Conceivably the quantity of tuberculin or tubercle bacilli absorbed may be sufficient to hyposensitize the patient for a variable period of time. This hypothesis was offered to explain the negative tuberculin skin tests in their series (4 of 9 were negative), and in that of Hughes et al[15] in which 3 of 18 patients were negative, none of whom were seriously ill. Thus, a negative skin test does not always rule out underlying TB.

Although TbP is not common, alcoholic or postnecrotic cirrhosis is commonly encountered in clinical practice. Confusion can arise when the two conditions occur simultaneously. In order to test the usefulness of abdominal pain, tenderness and fever as signs of TbP when it complicates cirrhosis, Burack and Hollister[5] reviewed the autopsy records from Mallory Institute of Pathology on 75 patients with cirrhosis and ascites who did not have TB. It was in fact found that 36 patients had abdominal pain, tenderness and fever. In more than half of them, the pain and tenderness were localized to the right upper quadrant over an enlarged liver. Tenderness that occurred elsewhere could be accounted for by other pathological conditions in all instances except one. Other pathological conditions included peptic ulcer disease, acute pancreatitis, thrombosis of the superior mysenteric vein, cholecystitis, cholelithiasis, acute pyelonephritis, cystitis and trauma to the abdomen. Thus, it may be useful to remember that in the uncomplicated case of cirrhosis with ascites, the patient not uncommonly has an enlarged tender liver but the tenderness in another part of the abdomen should alert the clinician to the probability of other intra-abdominal disease. Rarely could the presence of fever, like abdominal tenderness, be ascribed to cirrhosis alone. Fifty-seven of the 75 autopsy patients with cirrhosis had fever. In a large number it appeared concomitantly with gastrointestinal bleeding, pneumonia, or septicemia. Other infections or pancreatitis accounted for the remainder. Three patients had sufficient histological evidence of liver necrosis to account for their fever. Thus, it can be inferred that fever, when it occurs in cirrhosis and ascites, must stimulate a careful search for associated diseases.

Diagnostic Procedures

Confirmation of the diagnosis of TbP depends on several diagnostic procedures. Examination of the ascitic fluid is mandatory and gives very useful information. Table 3 shows the characteristics of non-infected ascitic fluid. This is suggestive of a transudate and is frequently seen in congestive heart failure, nephrosis and in uncomplicated cirrhosis.

An exudate usually has a specific gravity greater than 1.014 and a protein greater than 2 gms/dl and is usually seen in infectious peritonitis, malignancy and pancreatitis. The infected ascitic fluid usually has greater than 300 leukocytes per cubic mm. In malignancy and bacterial peritonitis, the predominant cell type is the polymorphonuclear leukocyte (PMN). In TbP, lymphocytes predominate. The persistent finding of greater than 50% PMNs in the exudative ascitic fluid should be presumed to be indicative of a non-tuberculous origin.

Needle biopsy of the peritoneum as a means of diagnosing TbP has been more widely accepted abroad than in the United States. This is a useful procedure for arriving at a definitive diagnosis rapidly. The incidence of finding caseating granuloma in the peritoneum by

Table 3

CHARACTERISTICS OF NONINFECTED ASCITIC FLUID

Gross appearance—clear
Specific gravity < 1.014
Total Protein < 2.0 gms/dl
Total Leucocytes/mm3 < 300
Polymorphonuclear leucocytes/mm3 < 25
Lymphocytes/mm3 > 75

this technique is quite high and varies from 64%[14] to 100%[16]. If the AFB can be identified in addition to the caseating granuloma, then the diagnosis becomes easier. Figure 1 shows a peritoneal biopsy from a patient with TbP. The giant cells and the caseating necrosis can be seen. Figure 2 is an AFB smear. Non-caseating granulomas of TbP have also been reported recently by Fedotin et al.[17] Two patients, in whom the peritoneal biopsy histologically showed non-caseating granulomas, were proven to have *Mycobacteria* by cultural identification in one, and by AFB smear in the other. In similar situations, other causes of granulomas of the peritoneum due to infectious agents such as *Histoplasma, Coccidioidomycoides, Blastomyces, Crypococcus; Actinomyces, Nocardia, Brucella, Treponema pallidum* and non-infectious causes such as berylliosis, Hodgkin's disease and reaction to foreign bodies such as talc must be considered. It is important to remember that the percutaneous peritoneal needle biopsy should be performed only on patients who demonstrate free fluid in the abdomen. If ascitic fluid is not easily obtained through the needle used to induce local anaesthesia, then the procedure should be abandoned in favor of an open biopsy. The risk of possible bleeding and bowel perforation should always be kept in mind for these risks increase considerably when the procedure is attempted in the absence of adequate free fluid. Levine[16] reported the establishment of a diagnosis of TbP in 20 patients with needle biopsy of the peritoneum. Such patients must be followed closely for 48 hours after the procedure and if their condition worsens, diagnostic paracentesis must be performed rapidly to ascertain whether the biopsy procedure has been complicated.

The combination of peritoneoscopy and peritoneal biopsy increases the diagnostic success rate considerably. In Singhe's series[14] the diagnostic yield was 85% with this combination.

Percutaneous liver biopsy does not seem to be a diagnostically rewarding procedure unless the TbP is a feature of dissemination. In Singhe's series[14] only 9% of their cases had a liver biopsy positive for caseating granuloma.

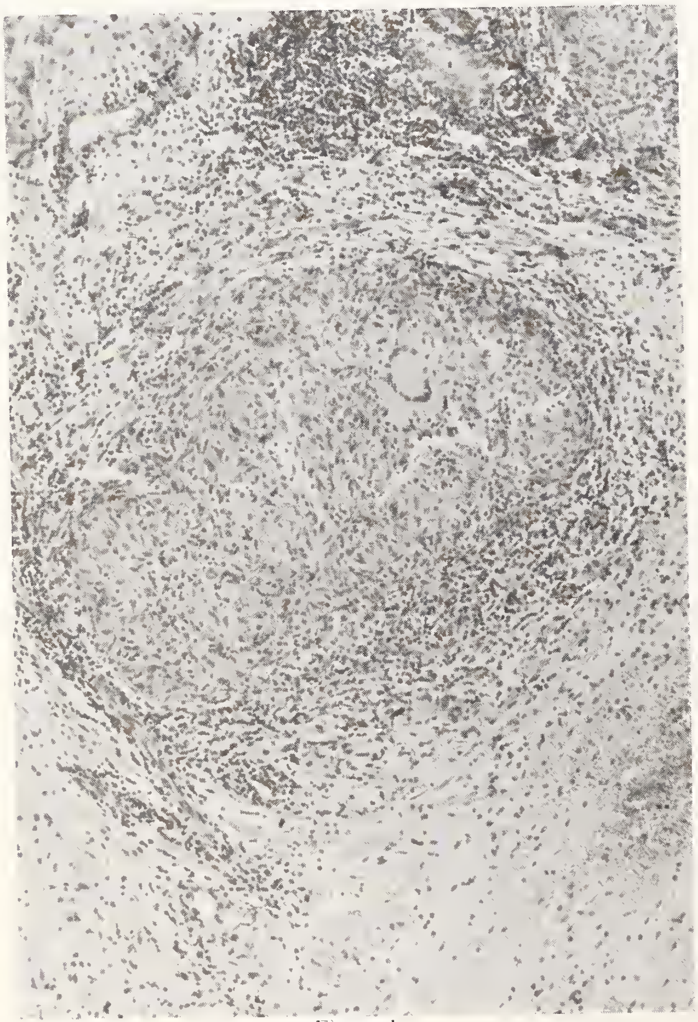

Figure 1
A peritoneal biopsy from a patient with tuberculous peritonitis.

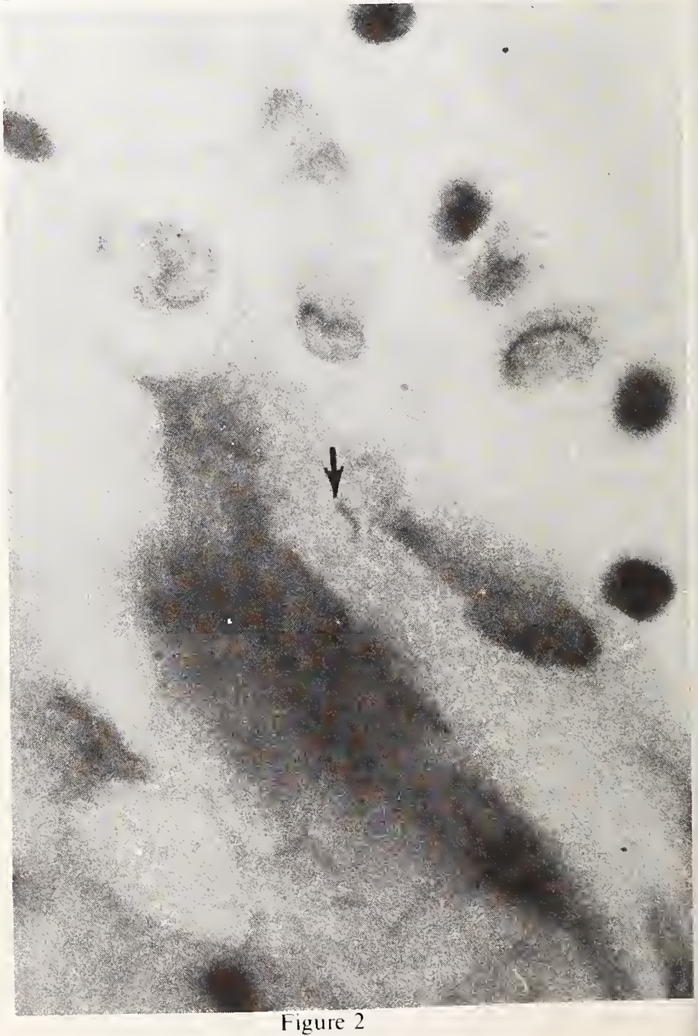

Figure 2
An acid fast stain of the peritoneal biopsy.

Prior to the development of adequate *in vitro* culture media for the isolation of *Mycobacteria*, the confirmation of the diagnosis required intraperitoneal inoculation of the body fluid or biopsy material in guinea pigs and reproduction of the disease process in the animal six weeks later with demonstration of caseating granulomas at autopsy. Now most laboratories use artificial media for growth and identification of the AFB. However, because *Mycobacterium* divides approximately every 12 hours as compared with 20 minutes for bacteria such as *E. coli*, it still requires six weeks of incubation before the cultures become positive.

A search for AFB on a direct smear of the ascitic fluid is often unrewarding. The yield of positive cultures from ascitic fluid was increased to 83% in Singhe's series[14] by using one liter of ascitic fluid for culture. Utilization of both animal and artificial culture techniques may increase the yield of positive cultures. However, because of the long incubation period required to obtain cultural proof, greater emphasis and reliance is being placed on clinical judgment and histological findings. Borhanmanesh et al[7] in their series of 32 patients from Iran state, that in view of the low yield of AFB's from cultures, the histological approach remains the most practical means of rapid diagnosis. Neither tissue nor sputum was cultured for AFB nor inoculated into animals.

Treatment of Tuberculous Peritonitis

Prior to the advent of effective anti-tuberculous drugs, the mortality from tuberculous peritonitis was 50%. Pacchione[1] reported 40% mortality in their series, and Barrow[18] reported 55%. With effective antituberculous therapy, the mortality rate can be decreased to about 4%. Most clinicians prefer to use a combination of drugs rather than a single drug and the consensus on the duration of therapy is long term (i.e. 18 months—2 years) with close follow-up for several years for any evidence of reactivation. Even though successful therapy with one drug has been reported, long-term follow-up has shown that the rate of reactivation appears to be much higher in this group. Whether 2 or 3 drugs are used is again a matter of individual preference. In Borhanmanesh's series[7] streptomycin, isoniazid, and paraaminosalicylic acid were used initially in the hospitalized patients, whereas the outpatient regime consisted of only isoniazid and paraaminosalicylic acid. In Singhe's series[14] the patients were treated with isoniazid and streptomycin for the first three months and with isoniazid and paraaminosalicylic acid thereafter. Ethambutol has replaced para-aminosalicylic acid in this country.

The usefulness of adrenal-cortico steroids in the treatment of TbP is still controversial. Singhe[14] attempted to define its usefulness by giving cortico steroids (Prednisone), 30 mgs daily for three months, to alternate patients in his group in addition to the antituberculous drugs. The results of his study showed that while anti-tuberculous treatment was highly effective with no deaths in either group, long-term evaluation indicated four patients in the non-steroid group developed complications from fibrotic adhesions, a complication not seen in the steroid treated group. He suggested the addition of steroids to these regimens to prevent the long-term fibrotic complication of TB. In the series by Borhanmanesh et al,[7] steroids were neither added nor recommended.

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Occult Splenic Rupture: Presentation as a Gastric Pseudotumor

MORRY MOSKOVITZ, M.D.

In recent years, the syndrome of "occult" splenic rupture has been recognized as an entity distinct from acute and delayed rupture of the spleen. The traumatic episode that causes the rupture is often unrecognized. The resultant splenic hematoma masquerades as a variety of conditions including intra-abdominal malignancy, refractory anemia, pancreatic pseudocyst, intra-peritoneal suppuration, or angina pectoris.[1-6] It occurs in less than 1% of all cases of rupture of the spleen.

This report describes a patient who presented with radiographic and endoscopic evidence of a gastric fundic tumor which proved to be edematous fundic folds caused by a chronic splenic hematoma.

Case Report

A 55-year-old man presented with intermittent epigastric and left subcostal sharp pain for two days which radiated to the left shoulder. He had noted a gradual fifteen pound weight loss in the year prior to admission. A similar self-limited episode of pain occurred six months prior to admission. There was no history of recent trauma. Thirty-three years ago he sustained blunt abdominal trauma in World War II, but has been well since then. He had a ten-year history of diabetes mellitus treated with chlorpropamide.

Physical examination revealed a thin man in no acute distress. The temperature was 98.8 orally, the pulse was 112, and the blood pressure 120/70. Physical examination was unremarkable except for a poorly defined fullness in the left upper quadrant and bilateral lower quadrant tenderness.

Hematocrit was 32.1% with normochromic, normocytic indices. The white cell count was 34,300 with 45% neutrophiles, 6% lymphocytes, 1% monocytes and 48% band forms. The lactic dehydrogenase was 469 IU (normal: 100-235 IU).

Glucose was elevated at 284%. Urinalysis, BUN and electrolytes, alkaline phosphatase and amylase were all within normal limits. Hematocrit on the second hospital day was 22.5%. Stool was persistently negative.

A chest film demonstrated a left plural effusion. An upper gastrointestinal series showed a large fungating mass in the fundus of the stomach thought to be most consistent with lymphoma or gastric leiomyosarcoma (Figures 1 and 2). Medial displacement of the stomach was noted. Because of the neoplastic appearance of the gastric fundus, gastroscopy was performed. A lobular, smooth surfaced, fundic mass was seen with retroflexion of the endoscope (Figure 3). Mucosal biopsy showed only focal acute gastritis; gastric cytology was negative for tumor cells. A Tc 99M bone scan and a Technetium 99 Sulfacolloid liver-spleen scan were interpreted as normal.

A thoracentesis of the left pleural effusion yielded serosanguinous fluid with 300 white cells (90% neutrophils) and 3310 red cells. The fluid protein was 4 gm% and the LDH 574 IU/liter with a serum LDH of 469. A barium enema showed only descending colonic diverticuli and an oral cholecystogram did not visualize. An intravenous pyelogram showed slight depression of the left kidney and a suggestion of splenomegaly.

An exploratory laparotomy was performed. A 20 cm thick-walled cystic structure was found in the left upper quadrant

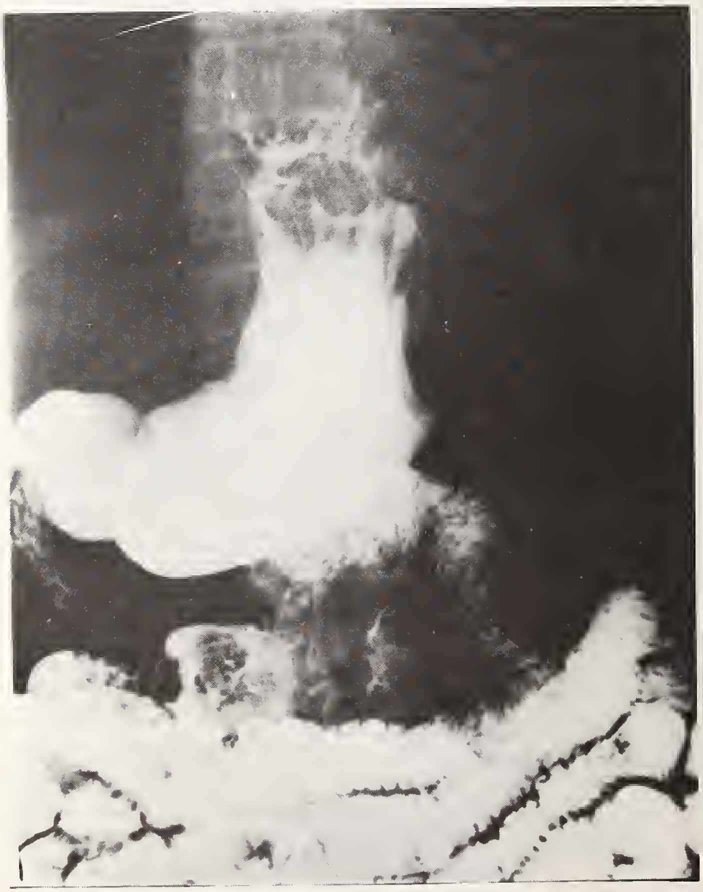

Figure 1
Predominent fundic folds and suggestion of medial displacement of stomach.

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adherent to the gastric fundus and diaphragm and engulfing the spleen. The fluid within the cyst was primarily organized hematoma; a frozen section of a nodule on the surface of the stomach was interpreted as leiomyosarcoma. As a result, a partial gastrectomy and splenectomy were performed as well as a resection of the cystic structure. Final pathologic examination showed a splenic laceration with an organized hematoma within a fibrous cystic structure. There was no evidence of neoplasm upon final sectioning. The fundic mucosal folds were edematous at the site of serosal adherence of the hematoma to the stomach.

Retrospectively, the spleen scan showed decreased uptake in the hilum with slight distortion.

Discussion

This case illustrates the endoscopic and radiographic appearance of a gastric pseudotumor due to occult rupture of the spleen. Occult rupture is recognized as an entity distinct from acute and delayed rupture. Acute rupture of the spleen is heralded by profuse intra-peritoneal bleeding in the setting of acute trauma. In 15% of cases, the signs of acute intra-peritoneal bleeding occur after a delay, usually measured in weeks. Lorimer[1] was first to suggest the syndrome of "occult rupture of the spleen" in that it presents differently from the above entities. There frequently is no history of trauma. The resultant hematoma simulates a variety of disease states, including refractory anemia, pancreatic pseudocyst, intra-peritoneal suppuration, angina pectoris, or intra-abdominal malignancy.[1 6]

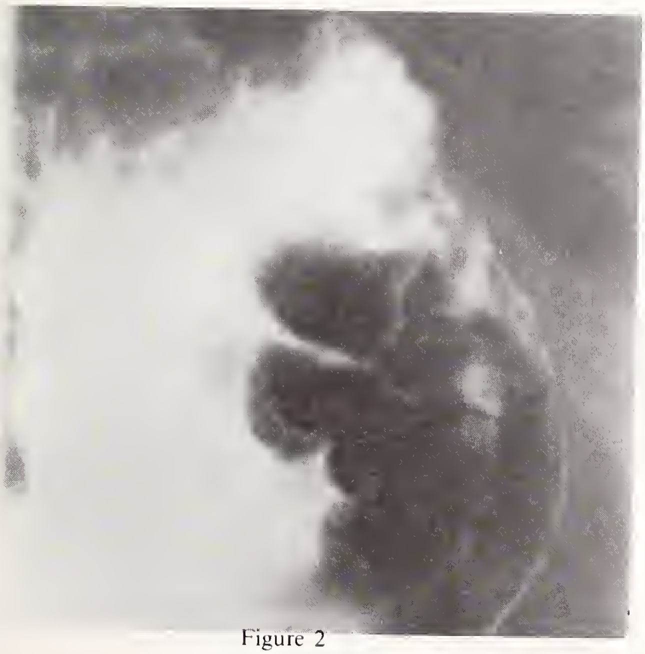

Figure 2
Gastric lobular mass.

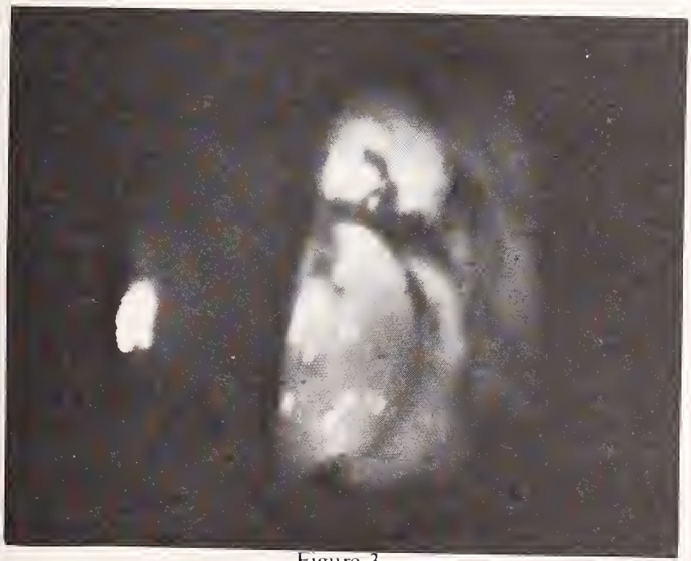

Figure 3
Endoscopic appearance of lobular mass in fundus of stomach. Note mucosa is smooth; retroflexion appearance of gastroscope is seen as dark area on the left third of photo.

Several cases in the literature have similarly presented with fatigue, weight loss, and left upper quadrant pain.[1 5] Likewise, gastrointestinal radiography demonstrated disturbed gastric fundi, often interpreted as gastric neoplasm. This report describes the endoscopic appearance of such an extrinsic mass. In this case, the "tumor" was simulated by extrinsic compression by the hematoma and by edema at the site of serosal adherence. Indeed, the visual appearance suggested an intramural mass.

Two points require further comment. This patient sustained blunt abdominal trauma 33 years prior to admission. There was no trauma since then, and he remained well. It would be difficult to relate that trauma to his current presentation. Finally, the spleen scan was retrospectively re-interpreted as being abnormal. Particular attention should be paid to the spleen scan if this entity is suspected as several authors have found splenic distortion often diagnostic of delayed or occult splenic rupture.[3 6] Selective abdominal angiography has been diagnostic in cases where this entity was suspected.[2] The diagnosis should be made pre-operatively since organized abdominal hematoma may grossly simulate the appearance of infiltrating neoplasm, as it did in this case. This knowledge would obviate the unnecessary sacrifice of normal viscera.

The diagnosis should be suspected in patients with or without a history of trauma, weight loss, anemia, elevation of the left hemidiaphragm, an abnormal spleen scan, and a gastric mass which is still undiagnosed after biopsy.

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Attitudes Towards Oral-Genital Sexualtiy

JOHN P. CALLAN, M.D. AND RICHARD A. PLANCO, MSW

Introduction

Increased publicity[1 2 3 4 5 6] about oral-genital sexual behavior in books and popular magazines suggests the practice has become more widespread or attitudes towards it have changed recently. A review of medical literature fails to refute or confirm that impression. A thorough search of the usual sources of medical information, hospital, university and medical school libraries, reveals a surprising dearth of publications on it.

This seems strange because according to popular magazines over 90% of the population engages in oral-genital sex and thinks it normal. This statistic appears startlingly high for an activity that not long ago was considered deviant and perverse. The occasional medical studies that have been published do not reveal an incidence anywhere close to the 90% level. For example, Don A. Solberg, B.A. et al, in a study published in 1973 in the *New England Journal of Medicine*,[7] only found 39% frequency of oral-genital sexual activity in females of child-bearing age.

Different terms for oral-genital sex have appeared in the professional literature. These include mouth-genital,[8] oralism,[9] bucolingual-genital and genital kiss[10] in addition to oral-genital.[11] The popular magazines have dropped the "genital" using the shorter "oral sex." But that can be confused with osculation, mouth-to-mouth kissing. So I would suggest a new word, a combination of both to describe the activity. The neologism is called orgen. The neologism would be more specific and less euphemistic.

In view of the paucity of authentic medical information on orgen, many questions come to mind. Does the medical profession generally regard it with distaste, avoiding it as a subject of legitimate study? Is the practice as pervasive as *Redbook, Playgirl, Playboy* and *Penthouse* Forum surveys indicate?[1 2 3 4 5 6] Does it really have almost universal appeal? Is it more fulfilling than genital-genital sexualtiy? If the 90% figure is correct, does that make orgen normal? Or is the abstention of the remaining 10% abnormal?

The September 1975 *Redbook* finds in a study "without parellel in sex research"[3] that "oral-genital sex is an almost universal experience." *Redbook* reports 85% of the population engages in orgen occasionally or often and only 7% have never experienced it. The study also notes "for a considerable number of wives oral sex is the chief way and often it is the only way that they are able to achieve orgasm."

The 1976 *Playgirl* sex survey[5] reports 96% of their readers engage in orgen. Similar figures are affirmed by *Penthouse* but not a *Playboy* study of college students[4] published in October 1976. Less than 3/4 of the co-eds report engaging in orgen. Are they our new sexually repressed? Comprehensive sexual tomes, "Human Sexual Response"[12] and "Human Sexual Inadequacy"[13] by Dr. William H. Masters and his research associate, Mrs. Virginia Johnson, studiously avoid any discussion of orgen.

An anthology of sexual case histories by Dr. Richard von Krafft-Ebbing[14] displays no such diffidence. Republished in 1965, his "Psychopathia Sexualis" contains 15 strongly negative references to the "perverse desire to practice cunnilingus and fellatio."

Thirty-five years ago, Dr. A.C. Kinsey conducted his renowned investigations into human sexuality. Despite the completeness of his 9-year project, published as, *Sexual Behavior in the Human Male*[15] in 1948, his is dissatisfied with one research area—orgen. He complains, "Because of the long-standing taboos in our culture on mouth-genital activity, it is

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quite probable that there has been more coverup on this point than on most others in the study." Dr. Kinsey, in his first book, noted that only about a quarter of the population (26%) had engaged in orgen. By the time his second book, "Sexual Behavior in the Human Female"[16] appeared in 1953, the prevalence had risen to over 50%.

Because of the vastly different medical and non-medical figures, much confusion about orgen exists. In an attempt at clarification, a questionnaire was compiled exploring current attitudes towards it. Conclusions have been drawn from that. The questionnaire was administered to a random sample of the population in Hartford, Connecticut, by two investigators. A total of 135 persons completed the questionnaire. Only 125 questionnaires are included in the final count. The remaining 10 were rejected when it appeared the respondents were not serious. The answers were completed semi-anonymously. The participants were not identified on it, but their identity was known to the investigators. This may have biased the results. But we believe it did not, because of marked internal consistency in responses. The study was completed in September 1976. Participants ranged from 18 through 73 years.

For simplicity and because of the limited size of the sample, only two groups are compared—the under and over 35's.

Procedures

The questionnaire was designed to be easily understood and completed. The major portion asked subjects what they thought about various aspects of orgen and only at the end are they asked if their opinions differ from their practice.

The questions asked were apparently shocking to some people. Reactions varied from nervous laughter and humorous avoidance to overt and direct refusal. One individual, a medical professional, complained the two investigators were distributors of obscene material. The investigators were surprised at the reaction of some colleagues as they shunned participation.

The questionnaire included several variables (see questionnaire). Forty-five percent males and 55% females responded. No appreciable differences in their responses were noted. Males over 35, in question #10, felt a dissenting partner should comply with the one who desired orgen. Many males answered negatively to the question and then noted in question #15 their opinions on #10 differed from their practices. Thirty-two percent of the males were over 35. Of females, 47% were over 35.

Marital status did not have any bearing on attitudinal differences. Some single respondents stated they had not practiced orgen but this was also true of some older, married respondents. Only 2 respondents said they had no sexual experience.

Age proved to be important. The mean age of all respondents was 36.38 years. Sixty percent was under 35 years of age and 40% was over 35 years of age. The mean age for those over 35 was 47.56 and the mean age for those under 35 was 25.2.

Studies in the past[15 16] have shown that the more educated, middle-class, white collar individual was generally less sexually inhibited. This did not prove to be the case. Our population had a higher educational level than the national average and a disproportionately high number were professionals. The mean number of years of education for those over 35 was 14.35 and the mean number of years of education for those under 35 was 14.75. Some under 35's are still receiving formal education.

An individual's ethnic background did not prove to be a variable worth study. It would have been difficult to correlate the various ethnic backgrounds as many people responded with three or four ethnic origins.

We asked each subject to tell where they were born to determine if a person growing up in one place might develop different attitudes from a person maturing elsewhere. The great majority of respondents were born in New England, so we could not test this variable. We did note that the few people in our study who were born in Europe and Asia reported they did not approve of orgen.

Results and Discussion

The results in percentages are as reported in the attached Table I.

The under 35 group seems to be generally more uninhibited in terms of oral-genital sexuality. Fully 91% consider oral-genital sex to be part of normal sex, whereas, only 60% of the over 35-year-old group feel that way. Sixty-eight percent of the under 35-year-old group feel that orgen leads to a better sex life. In contrast, a majority of those over 35 disagree. Twice as many people over 35 feel a dissenting partner should comply if the other partner desires oral-genital sex. Two and one-half times as many people over 35 find orgen usually more satisfying than genital-genital sex. The reasons for this are not clear. It could be that the younger age group still considers genital-genital relations a new and exciting form of sexual expression and the need for other forms of stimulation are not necessary.

The investigators question the validity of the responses to questions #14 and #16. After responding to earlier questions, the subjects may have been reluctant to state their practices differed from their beliefs. Also, the presence of the investigator may have influenced some subjects' answers to that question. In question #16, the investigators noted considerable anxiety through body language and nervous talk and laughter. We do not feel the minority of individuals who said they were uneasy answering is an accurate figure.

As opposed to the studies of a generation ago, oral-genital sex and the terms "fellatio" and "cunnilingus" were almost universally understood and accepted by those people approached. In contrast to the experiences of Dr. Kinsey's group, people seemed generally more willing and eager to discuss this subject and share their attitudes about it. Generally, orgen seems to be a widely practiced form of sexual intimacy in this part of the country.

Questionnaire

Please respond to the following questions by circling yes or no.

1. Do you approve of the recent increased publicity given cunnilingus and fellatio (oral-genital sex) in books and magazines? Yes No
2. Do you think more couples are practicing oral-genital sex as a result? Yes No
3. Do you think oral-genital sex is part of normal sex? Yes No
4. Do you think cunnilingus is acceptable as foreplay? Yes No
5. Do you think fellatio is acceptable as foreplay? Yes No
6. Do you think cunnilingus to orgasm is acceptable? Yes No
7. Do you think fellatio to orgasm is acceptable? Yes No
8. Do you think swallowing semen or vaginal secretions is acceptable? Yes No
9. Do you think that oral-genital sex leads to better and happier relationships? Yes No
10. If one partner desires oral-genital sex and the other does not, should the dissenting partner comply? Yes No
11. Do you think oral-genital sex is practiced as frequently as genital-genital sex? Yes No
12. Do you think oral-genital sex is usually more satisfying than genital-genital sex? Yes No
13. Do you think oral-genital sex is sometimes more satisfying than genital-genital sex? Yes No
14. Have any of your expressed opinions been different from what you actually practice? Yes No
15. *Optional*—Give numbers where your opinions differ from your practices.
16. Did you feel nervous or uneasy answering this questionnaire because of the subject? Yes No
17. Additional comments.

Table 1

PERCENTAGES

	Over 35			*Under 35*			*Totals*		
	Yes	*No*	*Don't Know*	*Yes*	*No*	*Don't Know*	*Yes*	*No*	*Don't Know*
1. Approve publicity	44	66	-	67	33	-	54	46	-
2. More people practicing	44	48	8	77	20	3	64	31	5
3. Considered to be a part of normal sex	60	38	2	91	9	-	78	21	1
4. Cunnilingus acceptable as foreplay	62	34	4	88	12	-	78	21	1
5. Fellatio acceptable as foreplay	66	44	-	91	9	-	81	19	-
6. Cunnilingus to orgasm acceptable	48	44	8	80	17	3	67	28	5
7. Fellatio or orgasm acceptable	50	48	2	85	15	-	71	28	1
8. Swallowing semen and vaginal secretions acceptable	50	50	-	65	35	-	59	41	-
9. Leads to better sex relationship	44	62	4	68	28	4	54	42	4
10. Should dissenting partner comply	40	56	4	21	77	2	29	69	2
11. Orgen practiced as frequently as genital-genital sex	16	82	2	37	63	-	29	70	1
12. Orgen usually more satisfying	24	72	4	9	89	2	15	82	3
13. Orgen sometimes more satisfying	46	52	2	79	19	2	66	32	2
14. Opinions different from practice	32	64	4	25	72	3	28	69	3
15. Nervous when filling out questionnaire	22	78	-	16	84	-	18	82	-

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Radiographic and Radionuclide Appearance of Wharthin's Tumors

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ABSTRACT—Radiographic and radionuclide examinations of the salivary glands have proved to be powerful diagnostic tools. X-ray examination provides important information on the overall architecture and fine structure of salivary glands while radionuclide scanning is a sensitive test of gland function. Combination of these tests in appropriately selected patients may lead to a higher and more accurate diagnostic yield.

Introduction

Matteson et al, in a recent review of tumors of the major salivary glands, found that Wharthin's tumors represented 20.7% of all benign salivary tumors and 29.1% of all benign parotid tumors.[1] An earlier study by Butler also found a comparatively high incidence of Wharthin's tumors among benign lesions of the major salivary glands.[2] Other reports cite an incidence of Wharthin's tumor ranging from approximately 7-14%.[3] [4] The reason for the discrepancy in these reports is uncertain but may be partly related to diagnostic methodology. If Wharthin's tumors are more common than previously reported, as suggested by Matteson and Butler, then the full appreciation of the spectrum of sialographic presentation is of great importance. Two cases are presented which appear to represent the extremes of early and advanced Wharthin's tumors.

Methods

Salivary glands were examined radiographically by retrograde filling with fat soluble (Ethiodol®) or water soluble (Renografin-76®) contrast media. Preliminary or scout films were obtained in antero-posterior and lateral positions. Stensen's duct was cannulated with a small flexible intravenous catheter or metal tipped cannula which had been fixed to a disposable syringe filled with contrast agent prior to

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insertion. With slight pressure on the syringe, retrograde filling of the parotid gland was accomplished under direct fluoroscopic control with spot films taken at various stages of the filling process. Post-evacuation films were also obtained after the cannula had been removed and the gland had been stimulated by lemon juice or citric acid.

Case Reports

Case 1*

A 45-year-old white male presented with a chief complaint of right sided facial swelling. The mass was located just above the mandibular angle. On physical examination the swelling was observed to be soft and painless. No other masses were palpable and there was no evidence of lymphadenopathy. In the patient's immediate family there had been recent histories of both head and neck tumors and mumps. The patient was afebrile and the swelling had been present for several weeks at the time of examination.

Scout films failed to demonstrate any evidence of calcifications or foreign bodies. The gland was examined by retrograde filling with Ethiodol®. Diffuse pooling of the contrast agent was noted at the time of filling (Figure 1). Virtually no normal ductal structures were identified. Ethiodol was retained for more than 48 hours. Surgical excision of the gland resulted in a histopathologically confirmed diagnosis of Wharthin's tumor.

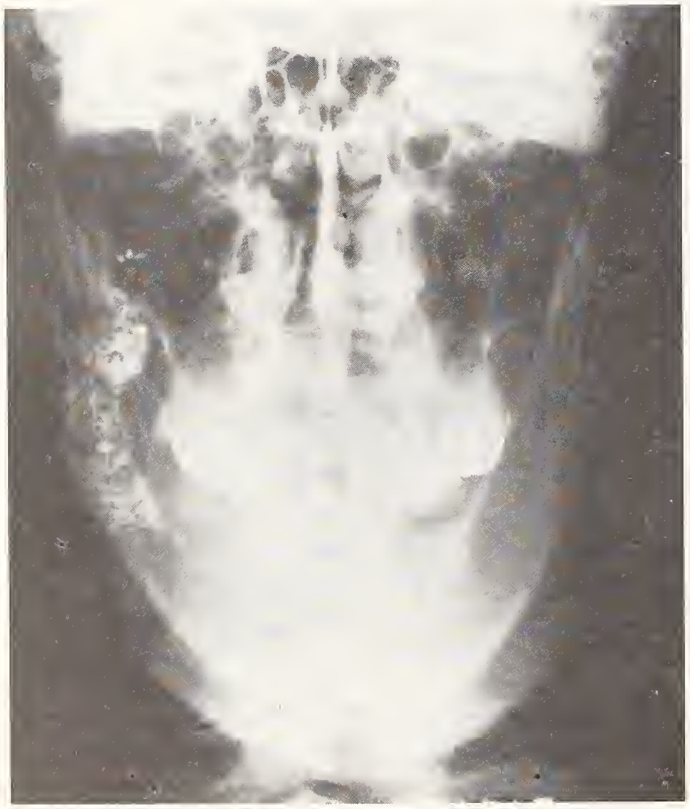

Figure 1A†

A P-A view of the right parotid gland obtained after cannulation and retrograde filling with Ethiodol®, a fat soluble contrast agent. The contrast agent is pooled into droplets of varying size. There is no evidence of arborized ducts which would be expected in a normal gland.

Case 2

A 62-year-old white male presented with a chief complaint of a pea-sized painless mass anterior to and below the right pinna. No other positive clinical findings were elicited and the patient's history was noncontributory. The patient was examined by a radionuclide pertechnetate scan and sialography. The radionuclide study revealed a hot spot during the early filling stages. The technetium-pertechnetate images also demonstrated retention of the radionuclide for an extended time after stimulation of the gland by ingestion of lemon (Figure 2).

Sialographic examination following the radionuclide scan demonstrated an anatomically normal parotid gland with the exception of a faint, early parenchymal blush which developed in the region of the mass (Figure 3). Subsequent reflux of dye caused by minor displacement of the cannula was observed fluoroscopically and resulted in pooling of the contrast agent within the mouth, pharynx, and esophagous which on plain films appeared similar to but less dramatic than the pooling evidenced in sialographic examination of the first patient.

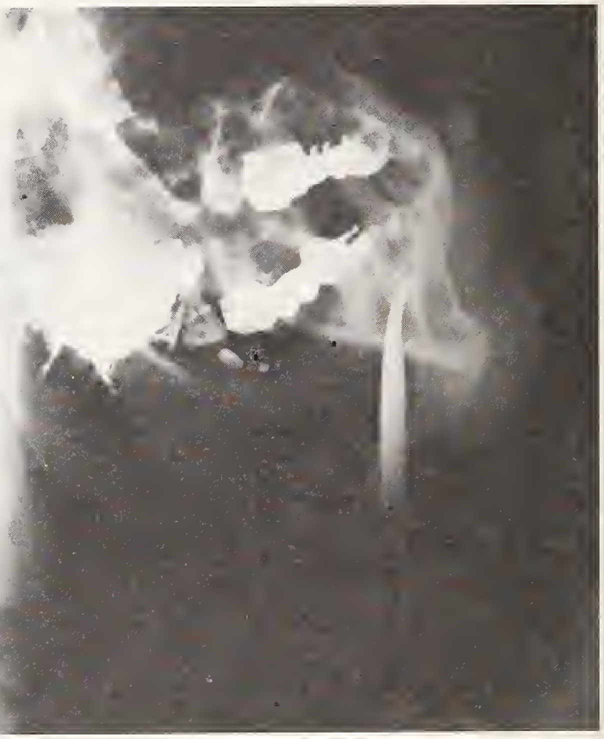

Figure 1B

A lateral projection, also obtained after filling, shows Ethiodol® filling a large irregular defect in the central portion of the gland with smaller defects extending into the periphery.

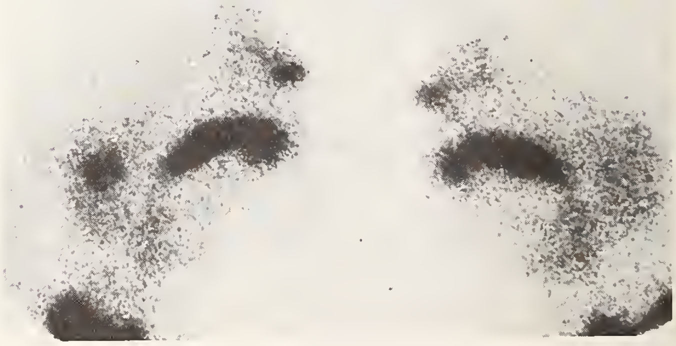

Figure 2

The radionuclide images of the salivary glands in lateral projections. Normal accumulation of the radionuclide is seen in the mucosa of the nose, in the minor salivary glands of the palate and in the thyroid. Note an abnormal area of increased radioactivity (hot spot) over the right parotid gland.

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*Matteson, et al.

†From Matteson, S.R., Cutler, L.S., and Herman, P.A.: Wharthin's tumor. Oral Surg. Oral Med. Oral Path., *41*:129-134, 1976.

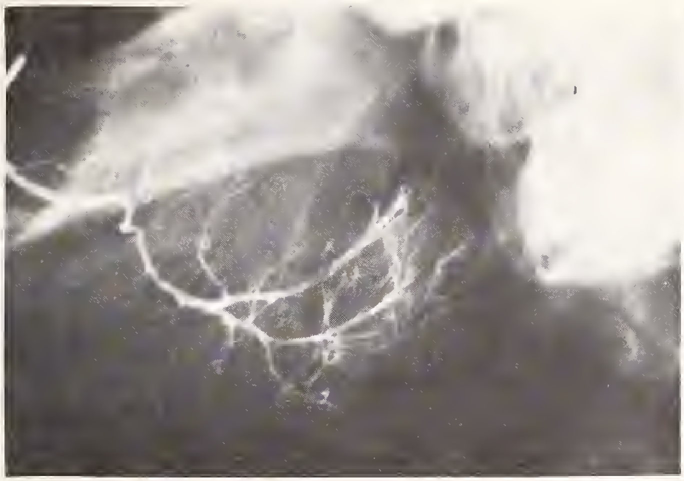

Figure 3A

A faint parenchymal blush was seen at the superior-posterior margin of this parotid gland after retrograde filling with Renografin-76. The parenchymal blush is presumed to result from extravasation of the contrast agent following the loss of structural integrity of the lining epithelium.

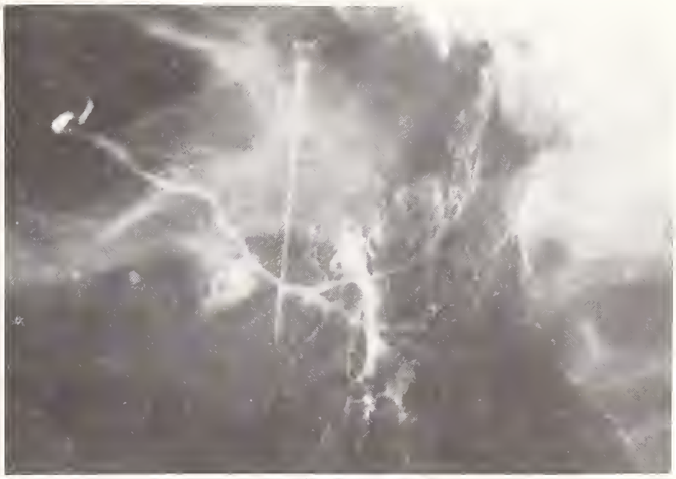

Figure 3B

Contrast agent which spills into the oral cavity after reflux from around a salivary cannula can be mistaken for pools of contrast agent within a gland when viewed on a two dimensional film. Direct fluoroscopic control minimizes the possibility of this type of false positive finding.

Discussion

Wharthin's tumor, also known as papillary cystadenoma lymphomatosum, oncocytoma branchioma, bronchiogenic adenoma, and adenolymphoma occurs primarily in white populations. The tumor most commonly arises in the lower pole of the parotid gland and is usually located posterior to the angle of the mandible or in front of the ear. Multiple discrete nodules are not uncommon.[5]

Histologically, the tumor contains tubular glands and papillae which may be together or isolated in different segments of the lesion. Epithelial structures are supported by a delicate connective tissue and areas of lymphoid tissue and cystic spaces. In the early stages of tumor formation, possible discontinuities in the tumor epithelium or basement membrane and/or altered permeability may result in the blush observed on sialography. At late stages of development, direct connections appear to develop between the remaining normal ductal structure and large cystic cavities.[5]

Sialography, which dates back to 1913, has been successfully used to outline the radiographic anatomy of the major salivary glands.[6] Sialography is particularly valuable for: the detection of calcifications or foreign bodies whether they are opaque or lucent, the detection of glandular obstructions, the demonstration of glandular distortions resulting from obstruction, infection or prior trauma, to evaluate glands for intrinsic or extrinsic compression, and to identify focal areas of destruction. In some instances, sialography, because of its resolution, may be helpful in planning surgical procedures. Sialography also provides limited information on gland function if one can observe dilution or beading of contrast agents with excessive secretions or by assessing the rate of excretion or time of retention of a contrast agent after retrograde filling.

Radioisotope studies, however, provide a sensitive tool for the study of salivary function, and in some instances are helpful in the identification of space occupying lesions. The scan usually follows intravenous injection of technetium-99 pertechnetate which is handled metabolically in a manner similar to that of iodine and other halogens. Technetium-99m has a half life of six hours which limits patient dose. The emitted energy of 140 kev makes external detection convenient. Following administration of the radionuclide, precise measurements can be made of concentration, retention, and excretion. Radionuclide salivary scans have been particularly useful in the evaluation of patients with Wharthin's tumors; these present as focal hot spots in a majority of cases. The radionuclide studies also have been helpful in the diagnosis of autoimmune diseases of the salivary glands, where rate studies have provided a reliable diagnostic tool during early stages of disease.

When a tumor is far advanced as seen in Case 1, sialography alone may be adequate to determine whether a mass is intrinsic or extrinsic and to define its boundaries. In many instances, however, sialography alone does not provide an adequate basis for a clinical or a definitive diagnosis. In Case 2, the value of the sialogram was greatly enhanced first, by fluoroscopic control which made it possible to distinguish between artifact resulting from reflux and pooling of dye within the gland substance; and second, from the results of an earlier radionuclide scan which identified an area of increased uptake and prolonged retention suggesting the presence of a Wharthin's tumor. In this instance, the sialogram was performed with a water based contrast agent to minimize the possibility of an adverse reaction to retained dye. Consequently, the blush at the superior and posterior margins of the gland may not have been as prominent as one might expect with oil based agents. Careful inspection of spot films, however, did result in the identification of one or more abnormal areas in which a blush was evident. There was, additionally, a higher than average number of ductal structures. These appear to be the first radiographic signs of Wharthin's tumor. When clinical findings suggest that sialography and radionuclide scan may be required, the scan should be performed first to minimize the possibility of a false positive resulting from mechanical or chemical stimulation which may occur during sialography.

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Computerized Tomography in the Evaluation of the Empty Sella

Computerized Tomographic Case of the Month

STEPHEN L.G. ROTHMAN, M.D. AND JANE W. BARRY, M.D.

Introduction

The term "empty sella," first used by Busch in 1951,[1] is now used to describe enlargement of the sella turcica associated with an incomplete sellar diaphragm which allows herniation of arachnoid tissue and cerebrospinal fluid (CSF) into the sella. The herniation is usually anterior to the pituitary which becomes compressed and flattened against the posterior sellar floor. Pneumoencephalography demonstrates air in an enlarged sella.

A common explanation of the etiology of the empty sella is a small herniation of the arachnoid through an incomplete diaphragm which enlarges with pulsatile variations of CSF pressure. Another explanation is that pituitary enlargement, either from a tumor or from physiologic enlargement during pregnancy, causes expansion of the diaphragmatic opening. If the tumor necroses or if the gland shrinks, a void remains which is filled with CSF. This explanation has been used to explain the fact that the syndrome is more common in women. Empty sella has also been reported in association with postoperative adhesions and with benign causes of CSF pressure elevation such as pseudotumor cerebri, the Pickwickian Syndrome and Respiratory Distress Syndrome.[2] Many cases previously labeled "arachnoid cysts" have probably been, in fact, empty sellas.[3]

The empty sella may be asymptomatic although it may be associated with headache, visual field abnormalities, or CSF rhinorrhea. Associated endocrine abnormalities have been reported, even in patients with no evidence of a pituitary adenoma.[2] [4] This is felt to represent the effect of increased pressure on the pituitary gland.[2]

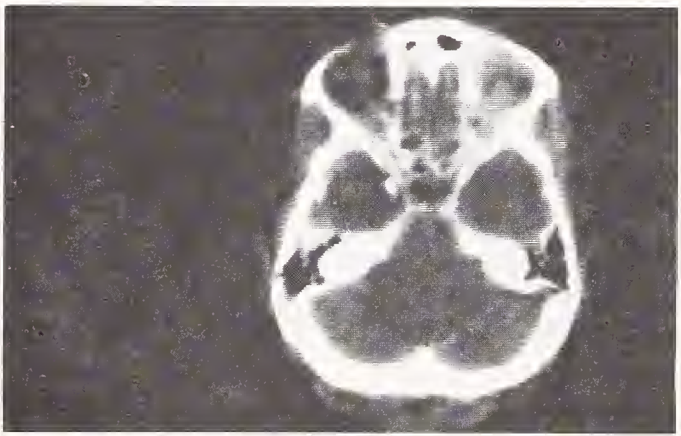

Figure 1
A forty-three-year-old woman with primary empty sella syndrome. There is also calcification of the left carotid.

Case Reports

Case 1

A forty-three-year-old black female presented with fatigue, palpitations, and frontal and occipital headaches. A complete endocrine evaluation, including prolactin level measurement, demonstrated no abnormalities. Skull films demonstrated sellar enlargement with erosion of the dorsum and thinning of the sellar floor.

Case 2

In 1967, a thirty-year-old black male presented with bilateral bitemporal inferior quadrant anopsia. A chromophobe adenoma was removed and he received 4500 rads to the sella. Visual fields returned to normal. He was asymptomatic until ten years later when he presented with decreasing visual acuity and was evaluated for recurrent tumor.

A CT scan performed on each patient demonstrated an enlarged sella. The attenuation value of the intrasellar contents was lower than that of normal brain substance (Figures 1 and 2). Case one is characteristic of the primary empty sella syndrome. The patient is female and obese and without localized neurological findings. She was discharged with no further diagnostic procedures and no treatment. In case two, the absence of a contrast enhancing mass and the empty sella appearance were reassuring in ruling out tumor recurrence.

Discussion

Computerized tomography is valuable in the evaluation of sellar enlargement. If the enlargement is

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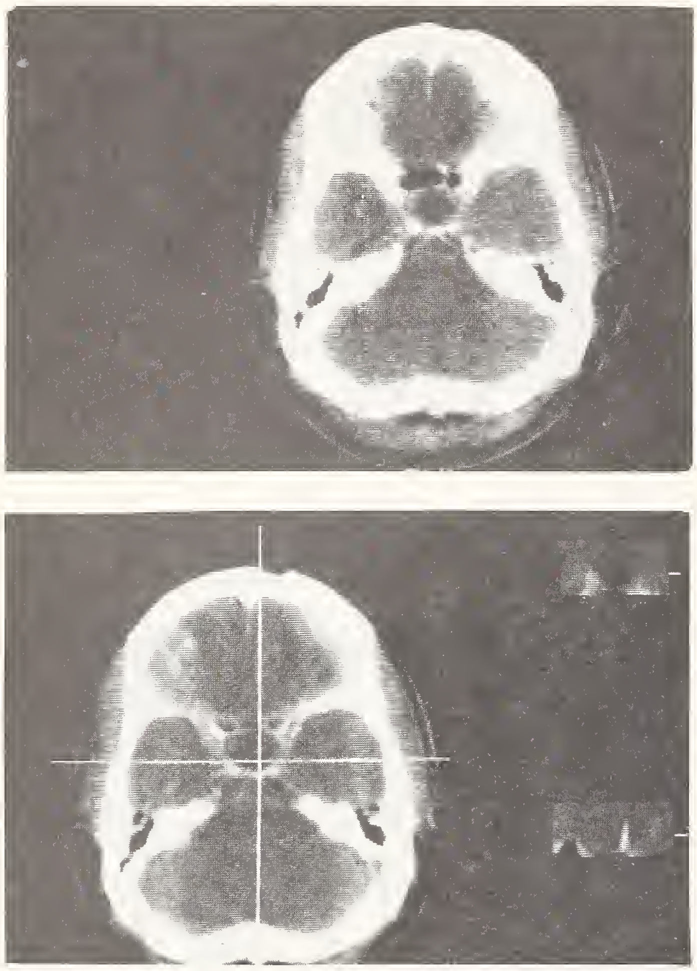

Figure 2A and B
A scan of a forty-year-old male eleven years following chromophobe adenoma removal demonstrates features of an empty sella but no evidence of recurrent tumor. In Figure 2B, reconstructed scans in the coronal and sagittal planes demonstrate low attenuation values within the sella. The lines on the axial scan correspond to the levels of the reconstructed scans.

due to a sellar or suprasellar tumor, there should be enhancement of the tumor following contrast administration.[5 6] An enlarged sella with low attenuation values on CT raises the question of empty sella. To obtain accurate attenuation values and to minimize the effect of volume averaging of adjacent sphenoid sinus air, it is important to obtain scans at close intervals (3-4 mm) and to position the patient carefully.[6] Accuracy is increased by using reconstruction to obtain lateral and coronal views or by using simultaneous x-ray correlation to check precise anatomic correlation.[6]

In the absence of sellar enlargement, the diagnosis of empty sella should not be made. Large autopsy series[1 3] have shown that in 20-30% of normal patients the pituitary does not completely fill the sella. However, Caplan,[2] in pneumoencephalograms on eighty-five patients, found no case of empty sella associated with a sella of normal size. The presence of an enlarged sella is useful for CT diagnosis of empty sella since the measurement of intrasellar attenuation values is more accurate when the sella is enlarged.[6]

Computerized tomography will not rule out a possible microadenoma which might co-exist with an empty sella. A microadenoma is better evaluated by other techniques.[7] Cystic tumors can demonstrate low attenuation values by CT but should be distinguishable from an empty sella by an adjacent area of enhancement.[5]

Conclusion

In the presence of sellar enlargement and CT demonstration of decreased attenuation, the diagnosis of an empty sella can be made. Careful technique, narrow thickness overlapping cuts, and reconstruction in the lateral and coronal projections are essential to obtain accurate attenuation values. If the sella is not significantly enlarged, or if there is any uncertainty about the intrasellar attenuation values, pneumoencephalography should be performed.[6]

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CURRENT DRUG INFORMATION

Moses Chow, Pharm. D., Consulting Editor

Prazosin: A New Antihypertensive Agent

SAMUEL JAMES MATTHEWS, PHARM. D.

Prazosin (Minipress, Pfizer) is a new oral antihypertensive agent with a unique chemical structure. It is indicated for the treatment of hypertension, either alone or in combination with other antihypertensive medications. The drug has also been used for the treatment of chronic congestive heart failure.[1,2,3] However, prazosin is not approved for use in this condition.

General Properties

Prazosin appears to exert its action through arteriolar vasodilation.[4,5] It is well absorbed from the gastrointestinal tract and is excreted principally in the metabolized form.[6] Most studies indicate no significant change in renal function with prazosin.[5,6,7,8] It has no significant effect on renin release.[5]

Efficacy

Prazosin reduces both systolic and diastolic blood pressure in the supine and standing positions with the hypotensive effect being greater in the erect position.[9] The hypotensive effect of prazosin is slow in onset and may require several weeks to become apparent.[9,10] In mild hypertension (diastolic 90-99mmHg) one sees the optimal effect in 4-6 weeks. In moderate (diastolic 115-129 mmHg) and severe hypertension (diastolic greater than 130 mmHg) the maximal effect may not be seen until 8 weeks after starting prazosin.[9,11] Tolerance to its antihypertensive effect does not develop.[12] Its antihypertensive effect is enhanced by concomitant administration of a diuretic,[10,13,14] and an additive antihypertensive effect has been observed when administered in combination with other agents.[6,15]

Prazosin has been compared with existing antihypertensive agents with good results in blood pressure reduction.[7,9,16,17,18] In a double blind crossover study comparing prazosin and methyldopa, Bloom et al[17] concluded that prazosin was as effective as methyldopa in reducing mean systolic and diastolic blood pressure. Recently, a double blind crossover study compared the hypotensive effect of prazosin and hydralazine in patients previously uncontrolled by propranolol and diuretic alone.[18] The dosages of betablocker and diuretic were held constant and each patient alternately received prazosin and hydralazine. Prazosin produced a greater and more prolonged fall in blood pressure with less side effects than hydralazine.[18]

Recently, an exciting new use of prazosin for the reduction of cardiac preload and afterload in chronic congestive heart failure has been proposed.[1,2,3] Preliminary results are encouraging and further work is needed to determine the long term effects of prazosin in the management of chronic heart failure.

Side Effects

Postural dizziness is one of the most frequent side effects seen with prazosin.[9,11,19] It occurs mainly after the first few doses, is due to postural hypotension,[20] and may or may not disappear with successive doses.[19,21] Postural dizziness may recur when the prazosin dose is increased rapidly. Some patients may suffer from postural dizziness but not show significant hypotension. Postural hypotension is usually noted after large initial doses[22] and in particular is more common when prazosin is given to patients taking a beta blocker or an adrenergic blocking agent.[6,7,19,21] Syncope is one of the most severe consequences of the postural hypotension and occurs one to two hours after the first dose. The response to prazosin may be dose-related.[19,21,22,23]

Prazosin has little effect on supine and sitting heart rate but may cause an increase in heart rate (up to 15 beats per minute) in the standing position or during exercise.[13,17,18,24] The increase in heart rate may be less than hydralazine.[18]

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No significant electrolyte and metabolic abnormalities are seen with prazosin. However, edema may be seen in 4% of cases,[11] and a diuretic may be helpful in eliminating it.[14] Other less common side effects are: nasal congestion, headache, acute febrile polyarthritis, lupus-like syndrome,[25] dryness of the mouth, and dermatological reactions or palpitations.[11]

Dosage

Prazosin is available in 1 mg, 2 mg, and 5 mg capsules. Initially, 1 mg tid is suggested and subsequent titration to a maximum of 20 mg is recommended. The onset of action is often delayed and full effect of any given dosage should be allowed to occur prior to further dosage increases. Severe orthostatic reactions have occurred and appropriate precautions should be taken whenever therapy is initiated. It is recommended that the first 1 mg dose be administered at bedtime. After initial control is reached, twice daily dosage may be attempted.[13 26] When starting prazosin in patients with chronic renal failure, care must be exercised because these patients may respond to small does.[6] When adding other antihypertensive agents to prazosin, its dosage should be reduced to 1-2 mg tid and then retitrated as necessary.

Conclusion

Clinical studies have shown prazosin to be efficacious in combined therapy for hypertension. It is an alternative to hydralazine and may be better than hydralazine in those patients who do not respond to diuretics alone and who cannot tolerate an increase in heart rate. It may also have a role as a third agent in a diuretic beta-blocker regimen. Prazosin's slow rate of onset must be considered prior to adjustments of dosages. Its propensity to cause orthostatic hypotension, not commonly seen with hydralazine, may preclude its use in some patients.

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The Right to Die

HANS JONAS, PH.D.

In spite of the almost commonplace ring which the title phrase of this paper has acquired in the course of recent public debate, a first reaction to it should still be wonder: What an odd combination of words! How strange, when one stops to think of it, that we should nowadays speak of a right to *die,* when throughout the ages all talk about rights was somehow predicated on the right to *live,* the most fundamental and most general of all rights. Indeed, every other right ever argued, claimed, granted or denied, can be viewed as a particularization or extension of this primary right, since every particular right concerns the exercise of some faculty of life, the access to some necessity of life, the satisfaction of some aspiration of life. Life itself is there not by right but by natural fiat: my *being* alive as a sheer, choiceless fact whose sole endorsement by nature is its congenital *powers* to preserve itself. But among men the fact, once there, needs the sanction of a *right* thereto because to live means to make demands on the environment and is thus conditional on being accommodated by that environment. Insofar as the environment is human, and the accommodation it accords has a voluntary element in it, such inclusive accommodation underlying all communal life amounts to an implicit granting by the many of the individual's *right* to live and his granting the same to all others. Every further right, equal or not, in natural or positive law, is derivative from this cardinal one and from the mutual recognition of it by its claimants. Justly, therefore, is "life" named first among the inalienable rights in the founding document of our Republic. And surely, mankind has had its hands full, and still has, with discovering, defining, debating, obtaining and protecting the various rights that enlarge upon the right to live.

How exceedingly odd, then, that we should lately find ourselves engrossed in the question of a right to die! All the more odd as rights are espoused to secure a blessing, and death is counted as a curse or at best something to resign oneself to. And most odd when we reflect that with death we are not making a demand on the world, where a question of right might come in, but on the contrary are quitting every possible demand. So how can the very idea of "right" here apply?

But what if my dying or not dying were to some extent in the area of choice—mine or others'? And if not only a right but also a duty for me to live could be construed? And for others, e.g. "society," not only a duty toward my right to live, but also a right to hold me to my duty to live, i.e., to prevent me from dying sooner than I must, even if I so will? What, in short, if (a) the whole syndrome of dying becomes amenable to control, and (b) mine is arguably not the sole voice to be heard in exercising that control? Then a "right to die" does become an issue; and it has in fact always been a moral and religious issue in the matter of *suicide,* where the element of choice is most clearly present; and there, it is also a legal issue in many systems of law that mandate or authorize various forms of intervention in this most private of all acts, some even going so far as to make suicide a crime. However, the present concern with a right to die is not about suicide, the deed of an active subject, but about a moribund patient's being passively subjected to the death-delaying ministrations of modern medicine. And although some aspects of the ethics of suicide do intrude into this question too, the presence of fatal malady as the chief agency of death enables us to distinguish: submitting to death from killing oneself, as also permitting to die from causing death.

The novel problem is this: Medical technology,

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where it cannot cure or relieve or purchase a further, if short-term, lease on a worthwhile life, can yet put off the terminal event of death beyond the point where the patient himself may *value* the life thus prolonged, or even is still capable of any valuing at all; and this marks often a therapeutical stage where the line between life and death wholly coincides with that between continuance and discontinuance of the treatment—in other words, where the treatment does nothing but keep the organism going, without in any sense being ameliorative, let alone curative. This—the case of the hopelessly suffering or comatose patient—is only the extreme in a spectrum of medical know-how which, allied to the institutional power set-up of the hospital and backed by the law, creates situations in which it becomes a question whether the rights of the (typically powerless and somehow captive) patient are observed or violated; and among them would be a right to die. In addition, when treatment becomes identical with keeping alive, there arises for physician and hospital the spectre of killing with discontinuance, for the patient the spectre of suicide with demanding it, for others that of complicity in one or the other with mercifully facilitating or not resisting it. This aspect of the matter, which alloys its purely ethical resolution with legal constraints and fears, we reserve for later. As to the rights of the patient, a novel "right to die" does seem to have emerged with these developments; and because of the novel, merely sustaining types of treatment, this right is clearly subsumed under the general right to *accept or reject treatment*. Let us first discuss this wider and little contested right, which always, if in a less direct manner, also includes death as a possible and perhaps certain outcome of its choices. In this, as in our whole discourse, we shall have to distinguish between legal and moral rights (and likewise duties).

Now *legally*, in a free society, there is no question that everyone (disregarding minors and incompetents) is entirely free to seek or not to seek medical advice or treatment for any illness of his, and equally free to withdraw from a treatment at any time other than in the midst of a critical phase.[1] The only exception is illness that poses a danger to others, as do contagious diseases and certain mental disorders: there, treatment and confinement and also preventive measures like inoculation can be made mandatory. Otherwise, without such direct implication of the public interest, my sickness or health is my wholly private affair, and a physician's services are freely contracted by me. This, I believe, is the *legal* position here and generally in nontotalitarian societies.

Morally, the matter is more complex. I may have responsibilities for others whose well-being depends on mine, e.g. as provider of a family, mother of small children, crucial performer of a public task, which put moral restraints on my freedom to decide about myself, e.g. against treatment. They are essentially the same as those that ethically restrict my right to suicide even when the religious strictures no longer count for me. With some kinds of treatment, e.g. the dialysis machine for kidney failure, rejection in effect amounts to suicide. Yet with this significant difference from doing violence to oneself: others, including public powers, in fact any bystander, have the right (even considered a duty) to thwart an *active* suicide attempt by timely intervention, not excluding force. This, admittedly, is interference with a subject's most private freedom, but only a momentary one and in the longer perspective an act in behalf of that very freedom. For it will merely restore the status quo of a free agent with the opportunity for second thoughts, in which he can revise what may have been the decision of a moment's despair—or can persist in it. Persistence will in the end succeed anyhow. The time-bound intervention treats the time-bound act like an accident, from which to be saved, even against himself, can be presumed as the victim's own more enduring, if temporarily eclipsed, wish (sometimes betrayed by the very fact of imperfect secrecy that made the intervention possible). The saved one has it in his hands to prove the presumption wrong. The ethics of suicide itself are here not discussed, only the rights (or duties) of others to interfere with it; and there, what counts in the present discourse is just this: that counterviolence at the moment of suicidal violence will not force the subject to go on living but will merely reopen the issue for him.

Clearly, it is a different matter to force the hopelessly sick and suffering to keep submitting to a sustaining treatment that buys him a life he deems not worth living. Nobody has a right, let alone a duty, to do that, viz., in a protracted denial or self-determination. Temporizing restraint is in order to shield the irrevocable from rashness. But beyond such brief external delay, only the inward pull of responsibilities—"I must spare myself for them"—may refrain the subject, through his own will, from doing what all by himself he would choose to do.[2] But the same kind of consideration, let us remember, can also lead to the opposite conclusion: "The treatment is financially ruinous for my family, and for their sake I quit." If a duty—albeit a nonenforceable duty—to live on for others against one's wish is asserted, then at least a right to die for them must also be conceded. But not a duty! The two opposite pointings of responsibility are not of equal moral weight, as is evident when we ask what those with a claim on a person, the objects of his responsibility, can decently plead with him for: surely only his staying alive, never his agreeing to die. Death must be the most uninfluenced of all choices, life may have its advocates, even from self-interest, certainly from love. Yet even life's case must not be pressed too hard in any such pleading. Especially love should acknowledge, against the clamor of self-interest, that no duty-to-live, though it may *overcome* in me the *desire* to die, can really nullify my right to choose death in the circumstances here assumed. Whatever the claims of the world, that right is (outside religion) morally and legally as inalienable as the right to life, although the *exercise* of either right may by choice—but only by free choice—be subject to other concerns. The matching of the two in a pair means that either right sees to it that the other cannot be turned into an unconditional duty; neither to live nor to die.[3]

Does public law have a place in all this? Yes, in two supportive respects: (1) as part of its function to protect the right to life, it must also sanction the right to medical treatment by ensuring equal access to it; and (2) given the scarcity of medical resources, it must establish equitable standards of priority for that access. This latter function of public control, as is well known from the dialysis example we have used, can amount to decisions on who is to live and who is to die, and among the priorities governing that agonizing decision can be an individual's responsibilities for dependents, which may give him, other things being equal, an edge of eligibility over the lone individual. Thus the same thing we have found to militate from within against a person's wish or right to refuse treatment, viz. the dependence of others on him, appears now from without as an increased title to that treatment—at the cost of a third party's right to live. But what public authority thus gives, it also can later take away under the same principle of equity, in favor of a then better claim. We shall return to this contingency as an indirect legal resort in aid of the right to die.

The dialysis example is an extreme one. Usually, the right to decline treatment or ignore doctor's orders does not implicate the right to die, unless in a most abstract and indirect way, but rather the right to take risks, to gamble a bit with oneself, to trust nature and distrust medical art, to be fatalistic, or simply to come to terms with a disability, even with a shorter life expectancy, in exchange for freedom from a cramping regimen; or just the right not to be bothered. The dialysis example was chosen because, there, continuous treatment is tantamount to keeping alive, its interruption spelling certain death, and thus opting against it is not "taking a chance" but indeed a straightforward and directly effective decision for death. It is still not quite the type of case where the "right to die" poses itself as the worrisome issue it has lately become. For here the patient is (a) unimpaired in his mental powers to decide for himself, and (b) also physically a free agent who can walk off the machine, and nobody can force him back. Thus his right to die does not draw in the cooperation of others and can be exercised all by himself. The same goes for other life-sustaining therapies, like that for diabetics. In such cases, the power both to make the decision and to implement it oneself is present, and the right to die is not seriously contested nor effectively hindered from outside, whatever the inward ethics of it may be. The "worrisome" cases are those of the more or less captive, viz., hospitalized patient with terminal illness, whose helplessness necessarily casts others in the role of accessories to realizing his option for death, even to the point of substituting for him in making the option.

I shall discuss two examples: the *conscious*, suffering patient with, e.g., terminal cancer; and the irrecoverably *unconscious*, comatose patient. The latter example has been capturing the headlines lately because of the legal drama involved, but the former is more relevant intrinsically, more common, also more problem-ridden.

1. The suffering patient without hope of recovery or significant relief. Consider the following scenario. The doctor says, perhaps after a first or second operation: we must operate again. The patient says: no. The doctor says: then you will surely die. The patient says: so be it. This, since surgery requires the patient's consent, would seem to close the matter and raise neither ethical nor legal problems. However, the reality is not quite that simple. In the first place, the patient's "no" stands under the same enabling condition as his consent does, viz., that it be "informed" to be valid. In fact, consent itself only *is* informed if it also knows of the adverse prospects, on which a "no" might be based. Thus the right to die (if considered to be exercised by its competent subject himself, not by a proxy in his behalf) is inseparable from a right to truth and is in effect voided by deception. But such deception is almost part of medical practice, and not only for humane but often also for outright therapeutical reasons. Imagine the following enlargement of the above dialogue, after the doctor has announced the necessity for another operation. Patient: "What, if successful, will it give me? How long a survival and what sort of survival? As a chronic patient or with a return to normal life? In pain or free from it? How long to the next onset with a repetition of the present emergency?" (Remember, we speak of an incurable, intrinsically "terminal" condition). All these questions, to be sure, are about reasonable *chances* according to available medical knowledge, no more, but also no less.

Obviously, the patient is entitled to an honest answer. But no less obviously, the doctor is in a quandary when honesty means cruelty. Does the patient really want the unmitigated truth? Is he up to it? What will it do to his state of mind in the precious remainder of his doomed life, whether he decides for or against the temporary reprieve? And more vexing still: may the dire truth of my estimate not be self-fulfilling in that it saps the spiritual resources, the famous "will to live," with which the patient might succor my ministration? his "giving up" actually worsening the prognosis? Hope, after all, is a force by itself, and to stress it more than the opposite is a means not only of persuading to the therapy but also of strengthening its chances. In short: might truth not be actually injurious to the patient and deception not be beneficial in *some* sense, subjective and objective? Thus we find ourselves, in meditating on the right to die, confronted with the much older and familiar question: Should the doctor tell? That question indeed arises antecedently to our imagined situation. Should the doctor ever have told the patient in the first place that his condition, short of a medical freak, is incurable? Even "terminal" in the sense that it admits only of brief delay? Pat answers to these questions would betray insensitiveness to their complexity. For myself, I venture this statement of principle: Ultimately, the patient's autonomy should be honored, that is, not be prevented by deception from making its best-informed supreme choice—unless he *wants* to be deceived. To find *this* out is part of the true physician's competence, not learnt in medical school. He has to size up the person: no mean feat of intuition. Satisfied that the patient really wants the truth—his mere saying so is not proof enough—the physician is morally and contractually bound to give it to him. (Dr. Eric Cassell gave me this point as being his own policy, with his conviction from experience that the requisite discernment of will is possible.) Comforting deception, if noticeably desired, is fair; so is encouraging deception of direct therapeutical import, which anyway presupposes a situation not calling yet for the supreme choice. Otherwise, and especially if there *is* a choice to be made, the mature subject's right to full disclosure, earnestly claimed and convincingly apparent as his will, ought to have its way *in extremis*, overruling mercy and whatever custodial authority a doctor may have on behalf of the patient's presumed good.

This right to disclosure, by the way, extends beyond the needs of informed decision to a state of affairs where no decision is to be made anymore: what is then involved is not the "right to die," an issue in the practical domain, but the contemplative right to one's death, an issue in the domain not of doing but of being. This needs some explaining. What I mean is this: Even in the absence of therapeutical options, and thus with no "right to die" at stake, the terminal patient's right to truth is a right by itself, and I mean a sacred right for its own sake, besides its practical bearing on a person's extra-medical arrangements in response to such a truth. Taking a cue from the last sacrament of the Catholic Church, the physician should be ready to honor the essential meaning of death to finite life (against the modern debasing of it to an unmentionable misadventure) and not deny a fellow-mortal his prerogative to come to terms with its drawing near—to his very own terms of appropriation, be they submission, reconciliation, or protest, but anyway in the dignity of knowledge. Unlike the priest who acts *in loco dei*, the physician in his purely secular role cannot thrust the knowledge on him, but must heed the patient's secret choice as he divines it. Mercy can allow the indignity of ignorance but must not inflict it. In other words, besides the "right to die," there is also the right to "own" one's death in conscious anticipation—really the seal on the right to life as *one's own*, which must include the right to one's own death. That right is truly inalienable, although human weakness more often than not will prefer to forego it—which again is a right to be respected and nursed along by compassionate deceit. But compassion must not become arrogance. Lying to the stricken in disregard of his credibly evinced will is cheating him of the transcendent possibility of his selfhood to be face to face with his mortality when it is about to meet him. My premise here is that mortality is an integral trait of and not a fortuitous insult to life.

But back to the right to die. Assuming then that the patient has been told and that he has decided against therapeutical protraction of his moribund state and for letting matters take their course: in enabling him to make the decision and in abiding by it, his right to die has been respected. But then arises a new problem concerning the further implementation thereof. The option against protracting was, among other things, an option against suffering, and thus it includes the wish to be spared suffering, either by hastening the end or by minimizing pain during the remaining span—the latter in effect sometimes amounting to the former by the heavy dosage of drugs it requires. Heeding such wishes appears to be part of what has already been granted the patient with the "right to die" as such, when his decision was first allowed. Mercy in addition joins with these wishes in proportion as the suffering is acute. But their fulfillment involves the cooperation of others, perhaps even their sole agency, and here the institutionalization of dying by hospital confinement, added to the helplessness of the patient's condition, creates problems of the gravest sort. Usually, discharge into home care is impracticable, and we need not discuss what might or might not be done in the intimate privacy of compassionate love—even this not free of serious constraints. But the hospital, at any rate, puts the patient squarely in the public domain and under its norms and controls.

Now, as to outright hastening death by a lethal drug, the doctor cannot fairly be asked to do that, i.e., to make any of his ministrations with this *purpose*, nor the hospital staff to connive by looking the other way if someone else slips to the patient the means. The law forbids it, but more so (the law being changeable) the innermost meaning of the medical vocation which should never cast the physician in the role of a dispenser of death, even at the subject's request.

"Euthanasia" at the doctor's hand is arguable only in the case of a lingering, residual life with the patient's person already extinguished, which we shall discuss at the end. If otherwise we rule out euthanasia at the doctor's hand, so as to preserve the integrity of his calling even at the expense of the patient's right to die, then we must add that putting the means in the patient's hands falls little short of administering them. If nothing else, it would be contrary to the premise of the physician's privileged access to such means—a privilege jeopardized by the best-meant abuse.

But there is a difference between "killing" and "permitting to die," and again between permitting to die and aiding suicide. In the case of the suffering *conscious* patient we are speaking of, permitting ought to be freed from the fears of legal or professional reproof if it consists, e.g., in acceding to his steadfast request (not the request of a despairing moment) to take him off the respirator that keeps him alive with no prospect of recovery or significant improvement. Formally, the right is anyway his, and his alone, by his status of contractual principal in a service relationship, and the jurisdictional problem arises only from the quasi-surrender of rights to institutional trusteeship implicit in hospitalization. Such surrender in matters of medical routine remains conditional on the subject's continuing primary intent and does not extend to his right of revising that intent and making another ultimate choice. As to the *morality* of complying with it by discontinuing the life-support, i.e. desisting from its further use, only sophistry can in this case equate desisting with doing, thus permitting to die with killing. And after all, a patient's helplessness that puts him at the mercy of the doctor's compliance, should not make his right inferior to that of the mobile patient who simply can get up and leave without hindrance. The captive patient must not be penalized by disenfranchizement for his physical impotence. If he says "enough," he should be obeyed; and social obstructions to that should be removed.[4]

But passing from desisting to doing, what about painkillers, administering which is a positive doing on the doctor's part? Here, the oath "not to harm" can come into conflict with the duty to relieve, viz., when harmful doses become necessary to cope with the torture of intractable constant pain. Which duty should prevail? My intuitive answer is: In a terminal condition, the clamor for relief overrules the ban on harming and even on shortening life, and it ought to be heeded if the patient has been told what the price of relief is. To hasten death in this manner, as a byproduct of the quite different purpose of making the remainder of a doomed life tolerable, is morally right and should be held unimpeachable by law and professional ethics alike, even though it adds another lethal component to the given lethal condition. The latitude, thus carefully circumscribed, does not open the door to mercy killing, and it seems to me that it requires no euthanasia legislation, only a judicial refinement of the malpractice concept that would take such requested terminal alleviation out of it. Morally and conceptually, there is no confounding this consensual trade-off between tolerableness and length of an expiring stage with "killing." (For nonterminal cases, the issue is debatable, and much depends on the kind of survival at stake.)

2. Finally, the patient in irreversible coma, i.e. the case of a lingering, artificially sustained residue of life, where not even an imaginary "free agent" is left whose presumed own will a deputy might carry out. Now, failing such a virtual agent and putative chooser in his own cause, a *right* to die is, strictly speaking, not involved, since this of all rights must be something that its owner could possibly *claim*, if not by himself exercise. One couldn't properly tell *whose* right is upheld or violated with any decision—that of the former person or that of the present, impersonal remainder. (As only a person can be a subject of rights, it would have to be the former person, whose "posthumous" rights, as it were, could indeed be invoked—of which later.) What is in question is rather the right or duty of others to perpetuate the given state, and alternately their right or duty to terminate it by withdrawing its artificial support. Reason, sanity, and humanity, it is safe to assert, overwhelmingly favor the second alternative: let the poor shadow of what once was a person die, as the body is ready to do, and end the degradation of its forced lingering on. Yet powerful obstacles stand in the way of this counsel of reason. There is the human reluctance to kill, as which the letting die can here be construed, as it involves my ceasing to prevent it. There is the conception of the doctor's duty to be on the side of life under all circumstances. And there is the law, which forbids causing death intentionally and makes culpable even the causing it by neglect or omission. Though none of this touches properly on a right to die, and all of it at best tenuously on a right to live—there being no subject even implicitly claiming the one or the other and being hurt by its denial—yet the case of the comatose has in public argument become entangled with the right to die, and one hears this right invoked in support of one course of action, viz., allowing to die. For this reason, I include the issue in my survey.

There are two ways of getting out of the ethical-legal impasse I have described. One is: redefining "death" so that a comatose condition of such and such a kind constitutes already death—the so-called "brain death" definition, which takes the whole matter (death being already an accomplished fact) out of the realm of decision and makes it a mere matter of ascertaining whether the criteria of the definition are fulfilled. If they are, withdrawal of support would appear to be not just permissible, but a matter of

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course and even mandatory, as it would be indefensible to waste precious medical resources on a corpse. Or would it? Might not the withdrawal, that is, making the corpse even more of a corpse, cause a waste in another direction? Is not the deceased, if residually kept functioning, a precious medical resource himself? In that case, pronouncing dead and continuing the life support would not seem contradictory; they rather would be parts of one syndrome with concerns besides the patient's. I have registered elsewhere[5] my grave misgivings about this kind of a resolution to the problem—removing it by way of a definition that is tailored to the particular situation and its practical quandary, tainted with the suspicion of expediency, and giving rise to apprehensions about the extraneous uses to which it lends itself, e.g., to secure the most perfect material for organ transplants. Some of those misgivings have meanwhile come true; and the definition itself has suffered a serious setback as to its helpfulness in meeting the challenge of irreversible coma. For in the Quinlan case, where spontaneous respiration unexpectedly set in after forced respiration was discontinued by permission of the court, the girl was *not* dead by the criteria of the Harvard definition (which, incidentally, was not invoked by the court), yet still in a coma, and the question of further artificial life support (forced intravenous feeding, et al.) was posed again in all its original force. The shift from the moral to the technical ground diminishes our capacity to meet the question.

But there is another way of getting out of the impasse than by definitional semantics about life and death, namely, by squarely facing the issue of the *rightness* of continuing, solely by our artifice, what may *perhaps*, for all we know, still be called "life," but is only *that* kind of life, and this totally by grace of our artifice. Here I go with the papal ruling that "when deep unconsciousness is judged to be permanent, extraordinary means to maintain life are not obligatory. They can be terminated and the patient allowed to die." I go a step further and say: they *ought* to be terminated because the patient *ought* to be allowed to die; stoppage of the sustaining treatment should be mandatory, not just permitted. For something like a "right to die" can, after all, be construed on behalf and in defense of the past dignity of the person that the patient once was, and the memory of which is tainted by the degradation of such a "survival." That memorial, "posthumous" right (extralegal as it is) lays a duty on us, the guardians of its integrity by virtue of our mastery over it and thereby the executors of its claim. And if this is too "metaphysical" to convince our pragmatic conscience as to where our duty lies, then a down-to-earth principle of social justice, extraneous to the patient, but more likely to persuade the legislator, can come to the aid of this internal reason for mandating the termination: fair allocation of scarce medical resources (excluding the patient himself from such a classification!).

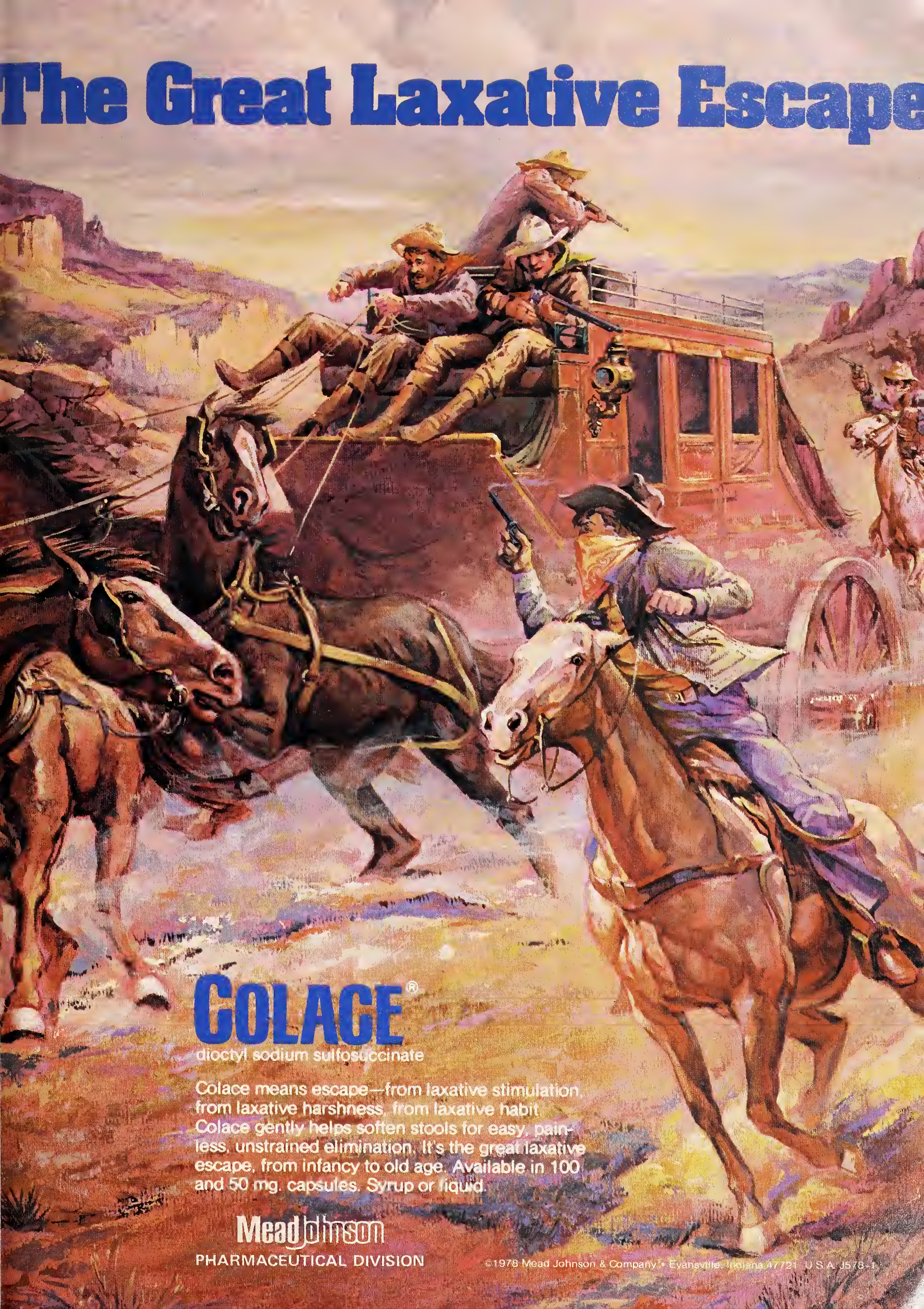
We have referred before to the life and death decisions necessitated by this circumstance, which is most likely to occur with respect to that elaborate apparatus whose life-preserving application must be continual. Our former consideration was with the initial *admission* to such facilities when demand for them exceeds supply (our example was dialysis). For the sombre choices that have to be made, priorities must be set by criteria as "just" as we can make them. The rough-and-ready battlefield "triage" system which the French adopted in the mass slaughter of World War I was the first instance of such a rule of selection. Under non-catastrophic conditions, the grading of more or less "deserving" cases becomes a complex and controversial matter, which in view of the many imponderables must often, at the upper end of the selection, be resolved arbitrarily. But although it must remain moot which is the "most" deserving case in a spectrum, at its simplifying lower end it is not moot which is the *least* deserving: the one that can least *profit* from the extraordinary treatment in short supply. This granted, there remains for us the question whether such a selectivity extends past admission into the further course of things and can later apply to the patient's *retention* in the treatment, e.g., when a "better" candidate comes along. In general, we would deny this and recognize here a preemptive right of prior occupancy. Once underway, it would be an unconscionable cruelty to revoke the life support (still desired by the patient) for whatever extraneous interests: as with an individual once born, the place once allotted to the patient is simply not up for bidding anymore. But the irreversibly comatose is beyond the reach of cruelty as he is beyond the enjoyment of benefit, and "his" profit from the treatment is literally nil, if "his" refers to a subject capable of reaping the profit. In this unique borderline case, therefore, the criterion of "least profit" can indeed apply and ethically rule for discontinuing what has been begun, so as not to withhold from others a life-preservation they can profit from. To me, as I have made clear, this consideration is secondary to the *internal* merits of the case which I consider sufficient and mandatory ground for termination—indeed: *the* genuine ground. But as this internal aspect is, notoriously, not above controversy, distributive social justice—a more pragmatic and hence more securely entrenched principle—may be invoked to the same effect. For me to do so is what Plato called "second sailing" *(deuteros plous)*: the next best way.

Not to end our discussion with this particular subject, let us recall that our topic was "the right to die," to which the case of the comatose is marginal at best. Not only is it too rare, too extreme, and too sharply edged to serve as a representative paradigm, it is (as noted before) not properly a "rights" issue at all—with which, however, it is conflated in the public imagination. The real locus of that right to agonize about is the much more common and treacherous shadow land of the conscious terminal sufferer. It is he, not the body already lost to all conscious life, whose plight poses the ethically troubling problems. What the two have nonetheless in common is this: that beyond the compass of "rights," they pose the question as to the ultimate *task* of medical art. They force us to ask: Is merely keeping a naturally doomed body this side of expiring among the genuine goals or duties of the physician? I said "genuine goals." As to actual goals served by the art we must note that, at one end of the spectrum, the once severe definition of what medicine is meant for has become much loosened and now includes services (mostly surgical) that are not "medically indicated" at all: contraception, abortion and sterilization on nonmedical grounds, sex metamorphosis, not to speak of cosmetic surgery for mere reasons of vanity or occupational advantage. Here, "service to life" has been extended beyond the ancient tasks of healing and alleviating to performing functions of a general "body technician" for diverse ends of social or personal choice, not excluding frivolous ends. But at the upper end of the spectrum, where our "right to die" issue is located, the august commitments of old still reign and determine the doctor's task. It is therefore important to define the underlying "commitment life" itself and thereby the lengths to which medical art must or must not go in honoring this commitment. Now we have already laid it down as a rule that even a transcendent duty to live on the patient's side does not justify a coercion to life on the doctor's side. But at present, the doctor himself is coerced into such a coercion, partly by the ethics of the profession, partly by existing law or judicial usage. Through the institutionalization of sickness and especially of dying, the doctor too is plugged into the machine at the hospital, once he has plugged the patient in. It is notoriously easier to get a court ruling for imposing treatment (children of Jehovah's Witnesses) than one for breaking off treatment (Quinlan). To defend the right to die, therefore, the real vocation of medicine must be reaffirmed, so as to free both patient and physician from their present captivity. The novel condition of the patient's impotence coupled with the power of life-prolonging technologies prompts such a reaffirmation. As a try, I suggest that the trust of medicine is the wholeness of life. Its commitment is to keeping the flame of life burning, not its embers glimmering. Least of all, is it the infliction of suffering and indignity. How to translate such a statement of principle into legally viable policy is another matter, and however well it is done, we cannot hope it to eliminate twilight zones with anxious choices. But with the principle as such affirmed, there is hope that the doctor can become again the humane servant instead of the tyrannical and himself tyrannized master of the patient.

It is thus ultimately the concept of *life,* not the concept of death, which rules the question of the "right to die." Our discourse has led us back to the beginning, where we found the right to life standing as the basis of all rights. Fully understood, it also comprises the right to death.

NOTES

1. A "critical phase" would be that between two linked operations or during post-operative care, or similar situations where only the complete therapeutical sequence is medically sane. It must then be considered contracted for as an indivisible whole. Physician and hospital would not have performed the first steps without the patient's commitment to the remainder. I suppose that a will to withdraw in mid-course can be legally overruled if it would turn the past portion of the therapy from benefit to injury, let alone outright danger.
2. If a believer, he might even "all by himself" reject the choice as falling within the sin of suicide. I would deny that it does (surrender to the sentence already pronounced and in execution by my mortal flesh is no more suicide than the prisoner's on death-row ceasing to seek further reprieve), but we are here considering only the secular ethics of these questions, without preempting their possible theological aspects.
3. Secular and religious ethics here agree. No religion, however strongly it condemns suicide as sin because it holds life to be a duty toward God, makes thereby the preservation of one's own life an unconditional duty—which would indeed lead to horrendous moral consequences. Socrates, the first to set forth the religious reason that forbids suicide (in Plato's *Phaedo*—in his last night's talk with friends before his unopposed execution!) was the same who had earlier explained why he chose death over life in the given conditions of the choice (in the *Crito*—when he was offered escape from the same prison in which the later talk is set). To Socrates, taking one's own life and not resisting death were obviously different things, and they should also today not be mixed up in any discourse on these matters.
4. The present state of the law seems to be that such an "enough" by the patient, given his competence, can indeed not be denied but would also, given present "malpractice" policy, force the doctor to resign from the case. As this would deprive the patient of further medical and hospital care (which he still needs for dying tolerably), the threat of it effectively blocks for him the option. It is here where a change in social attitudes must lead to a different judicial policy. [By the time of proofreading, the following AP news story from Fort Lauderdale, Fla., July 12, showed that the legal situation is more clouded than I had assumed: "A 73-year-old man suffering from 'Lou Gehrig's disease' has the right to have himself disconnected from the respirator keeping him alive, a judge here has ruled. But the state's attorney's office said it would appeal the ruling. . . ." The patient, Abe Perlmutter, "argued that it was an invasion of privacy to deny him the right to order the respirator disconnected" (The New York Times, 7/13/78, P. A16). Since the patient seems sane and competent, it will be interesting to learn the grounds for appeal.]
5. "Against the Stream," in H. Jonas, *Philosophical Essays* (Prentice-Hall, 1974), pp. 132-140.



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A Mind That Lost Itself: A Prospective Study of Mental Decompensation from Birth to Breakdown

(First of Two Parts)

E. JAMES ANTHONY, M.D.

Preamble

One is aware, like William James, what an intolerable character Clifford Beers must have been in his maniacal condition when he was more or less "bossing the universe," but, like William James, as one continues to read his book, one comes more and more to recognize and admire the "tenacity of purpose, foresight, tact, temper, discretion and patience with which he pursued his mental health movement trying to make sure that it would continue to prosper as long as a single psychotic was left in the country."

In my contacts with psychotics and psychotics-in-the-making, I am frequently astonished by their exquisite sensibility that appears at times to outshine that of the psychiatrists who are treating them. It is also true that at other times, they can circumnavigate the world of fragmented ideas without getting anywhere at all, disdaining intellectual analysis for rhapsodical associations. Our relationship with them is of crucial importance. Gifted observers, from the time of Plato, have been attracted to the huge potentialities that occasionally underlie the psychotic process and have attempted to unharness this creativity. To do this or to achieve any sort of understanding requires a particular mode of empathy without which a profound mental segregation occurs and with which one is able to form relatively lasting relationships with the psychotic based on reciprocal trust, confidence and understanding on a person-to-person level. This was observed to happen in the case of the Bleulers, both father and son, in Switzerland; with Lidz and his co-workers at Yale; with Laing and Esterson in England; and with all those tolerant, accepting little communities throughout the developing world where the insane continue to enjoy the therapeutic benefits of a family life.

A Prospective Autobiographical Account of Psychosis in the Making

The authoress, Virginia Woolf, came into my life in 1938 and has never left it. Psychosis (and creativity) were scattered throughout her extended family group. Virginia described her parents' marriage as incompatible, with herself inheriting oppositional trends of sense and sensibility, prose and poetry, masculinity and femininity (and craziness and sanity), all of which clamored within her for expression throughout her life. Of the four children of this infused marriage, Thoby died early, Vanessa became a well-known artist, Adrian a well-known psychoanalyst and Virginia, the most gifted of all, went crazy. It posed once again the enigma between vulnerability and invulnerability.

Virginia was regarded as a most unusual child from the beginning of life. She was past three before she was able to talk. So curious and unpredictable was she that her siblings nicknamed her "The Goat" and this stuck with her for many years.

Yet, at night in the nursery at the top of the house, she was the family storyteller. These fantasies (since they were no more than that) became grander, vaguer and less realistic as she continued but they entranced the other children. Following an attack of whooping cough at the age of six, she became even more different, quieter, more speculative and more introverted. At thirteen she wrote of a dream in which she had become God.

She saw herself very much like her father who described himself as a "skinless man" who first

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The Clifford Beers Memorial Lecture delivered at Yale University, April 1977.

collapsed when Virginia was six and again when she was nine from what he called "the fits of the horrors." While her mother was around, Virginia seemed relatively unaffected but in her thirteenth year, Mrs. Stephen died and this was, as Virginia recalled many years later, "the greatest disaster" that could have happened to her. It was not merely a shattering bereavement but she was now exposed directly to the chaotic characteristics of her father and for the rest of her adolescence she was looked after by her older sisters. To add to her appalling sense of vulnerability, Virginia was seduced by her stepbrother, many years her senior, and she lived with this secret for years. Later she revealed that George had spoiled her life before it had barely begun: naturally shy in sexual matters, she was from this time terrified back into a posture of frozen and defensive panic. The seductions had started much earlier in her life: "I still shiver with shame at the memory of my half brother, standing me on a ledge, aged about six or so, exploring my private parts."

But these external events were as nothing compared to the internal problems that were beginning to beset her. Within her, there seemed to be all that she longed for and yet all that she feared. These I have called in my own high risk subjects, "precursors of later psychosis." She experienced some episodes during childhood which she later on referred to as "breakdowns in miniature" and which I, many years later, termed "micro-psychotic episodes."

At thirteen, she had her "first breakdown" that was still not technically a psychosis since reality testing was preserved. What she experienced was a complex of feelings—a blankness of mind, a wish to be completely alone and to have no pleasure in life whatsoever. Toward the latter part of adolescence, she had a second breakdown which she was still able to describe with a certain amount of objectivity. She stated now that she had never been able to become part of life as if the world was complete and she was outside of it "being blown forever outside the loop of time." Other people seemed to live in a real world but she often fell down into nothingness. "I have to bang my head against some hard door to call myself back to the body." (It is interesting that most of the characters in her books have a sense of separateness: their minds seem lost in a dream world from which they hear in the distance the sounds of other people moving about in the world.) Later on she had her first psychotic break.

The Sense of Vulnerability

Virginia became conscious of her "skinlessness" and her extreme vulnerability from early childhood. She was constitutionally "delicate" and responded to the smallest physical ailment with great intensity—a tachycardia that was almost unbearable, a painful excitability and nervousness, an intolerable depression, and a fear of people that made her blush vividly if spoken to. She could hardly bear to leave the house. When she went out at this time, ordinary things horrified her.

Kafka, who lived in the same two levels as Virginia Woolf, reported how the real world always appeared to be transformed into a monstrosity whenever he came upon it. He once described a memory of himself as a very small child taking a nap in the afternoon on a warm summer's day and drowsily listening to his mother calling to a neighbor from the balcony: "What are you doing, my dear? It's so hot." The other woman, from her garden, replies: "I'm having tea outside." It was this perfectly ordinary exchange that haunted Kafka for the rest of his life. It seemed to him that somewhere out there beyond him there was a world of ordinary people interacting in an ordinary way whereas the environment that he generated for himself was characterized by menace and extreme apprehensiveness. Later on in his life, he remarked pathetically: "I have always wanted to see things as they are before they showed themselves."

Kafka, like Woolf, was aware to what extent creativity preserved him on this side of madness. Many creative people appear to suffer from a structural deficit (sometimes related to early object loss) which is temporarily healed by the creative production which compensates for the narcissistically experienced loss and counteracted the threat of partial or incipient disorganization. Yet the proximity to disintegration of the self seemed to contribute to the creative impulse. At the termination of a period of creative work was an especially vulnerable period for Virginia Woolf.

The constitutional vulnerability was accentuated by physical illness, by the loss of objects—her mother, her father, her stepsister (who was her surrogate mother) and her brother. In addition, certain periods of development were also vulnerable. The Russian, Vygotsky, who, had he lived, would have rivaled Piaget in his influence on the psychological world, was the only developmental psychologist who conceived of development as an alternation of vulnerable and stable periods. The vulnerable periods occurred during the first year of life, at three, at seven or eight years and at thirteen years. At such times of crisis, the children became moody, unstable, capricious, selfish and difficult. In the hyper-vulnerable child, these "normal" vulnerable periods become grossly exaggerated so that little "breakdowns in miniature" take place.

A Prospective Study of Breakdown

The new procedures of studying children at high genetic risk for psychosis have permitted us to observe, at first hand, the vicissitudes of an underlying psychotic process through the different phases of the life cycle. As a result of these studies, new knowledge is being obtained regarding the premorbid developments not only of antecedent disturbances but also the interplay of vulnerable and resilient elements within the personality. In order to objectify our study, since we did not feel that we would obtain creative accounts of the underlying experience, we devised elaborate measures for assessing the extent of the risk to which subjects were exposed during their childhood and the degree of vulnerability that lessened their immunity to the hazards. Those who scored highly on both sets of testing were designated HRHV or High Risk-High Vulnerability subjects. Not without some trepidation, because the field of inquiry is still rudimentary and ignorant, we predicted that an HRHV subject would undergo a series of antecedent disturbances, precursory symptoms, micropsychotic episodes or "breakdowns in miniature" and finally breakdowns at various stages in adolescence before becoming clinically psychotic sometime in adult life. Since we subscribed strongly to an epigenetic point of view, we admitted to a complex interplay between genes, development, successive environments and intervening benign and stressful experiences. We found that this life course was in fact predominant in many of our HRHV subjects who also seemed to manifest the feelings of vulnerability described so vividly by Virginia Woolf. One of our subjects, with no pretense at creativity, remarked that he seemed always to have had different compartments in his mind. "In one of them, the 'hello' section, I can say in a very ordinary way: 'Isn't it nice today' or 'We could have rain later on in the evening', but, at the same time, in another compartment, there is a feeling of something dreadful going to happen as if it contained a poison gas that was ready to enter the world and put an end to everything." This peculiar feeling of vulnerability hovers constantly and fills the background of attention. It eventually becomes a way of life, a state of mind, and a mode of looking at both the internal and external environments with heightened sensibility. Thereafter, there is a built-in expectation that an inner disintegration or an outer disaster of an unknown nature is lying in wait around the corner and elaborate strategies or creativities are developed to deal with the possibilities.

(This is the first of a series of two articles.)

DOLLARS, BOOZE, AND TOBACCO

The hazards of alcohol abuse and smoking are usually presented in personal terms—and appropriately so. But the cumulative economic impact of these dangerous practices can be startling—as depicted in a recent review from the Massachusetts Department of Public Health *(New England Journal of Medicine,* March 9, 1978). The following chart—reproduced from the article—is based on calculations from several sources, but the results, even if off by a few million dollars, speak for themselves:

Comparison of Estimated Economic Consequences of Alcohol Abuse and Cigarette Smoking, 1976

Cost Category	*Alcohol Abuse*	*Smoking*
Lost production	$20,587,300,000	$19,139,800,000
Direct health-care costs	11,929,300,000	8,224,000,000
Fire losses	375,200,000	175,900,000
Motor-vehicle-accident losses	6,586,800,000	Not estimated
Cost of violent crime	2,061,200,000	—
Cost of certain social responses*	2,654,000,000	Not estimated
Totals	$44,193,800,000	$27,539,700,000

*Includes highway safety, fire protection, criminal-justice system, administrative and service costs of social-welfare system and certain alcohol-related programs.

The authors estimate that the direct health-care costs due to alcoholism and smoking constitute about 20% of the total direct cost of medical care in this country; their total economic costs are about 25% of the total cost of all illnesses in this country. In the face of increasingly limited medical resources, these problems merit a very hard look in terms of both individual choices and national policy.—*The Harvard Medical School Health Letter,* Vol. III, No. 8, June 1978.

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Minors and Medical Contraceptive Services in Connecticut

DAVID W. SCHNEIDER, J.D.

The Connecticut Chapter of Zero Population Growth, Inc., has compiled this information which it believes may be of particular interest to physicians and other professionals working in the area of providing contraceptive services to minors in Connecticut. Readers are cautioned, however, to consult their attorney for specific problems in specific areas, especially as the legal rules in this field are in some flux.

The information is provided in a question and answer form. The first paragraph of each answer provides a short concise answer which can be read alone. Subsequent paragraphs, which are indented and single-spaced, provide expanded explanations. The general term "contraceptive services" covers all forms of contraception, including treatment and examination relating to the provision of contraceptives. Except in certain contexts, the same general rules also apply to abortions and sterilizations. The use of the term "parent" also refers to a minor's guardian, if not a parent.

1. Who is a minor in Connecticut?

Every person under the age of 18.

By statute, the age of majority is 18 years in Connecticut, as it is in most other states.

2. What Connecticut statutes deal with the issue of a minor's access to contraceptive services?

Connecticut has no statutes specifically dealing with the issue of minors and contraceptives.

As of December 31, 1975, 23 states and the District of Columbia specifically affirmed by statute the right of minors to obtain contraceptive services. Connecticut has no such statutes, but it does provide by statute that venereal disease care may be obtained by a minor without the consent of his parents, and the fact of such care shall be kept confidential by the physician treating the minor.

3. What is the basis, then, for the law dealing with the provision of contraceptive services to minors in Connecticut?

The common law and constitutional principles form the basis of that law in Connecticut.

In the absence of statutes, the common law which is developed by the courts, on a case by case basis, forms the basic structure for the law regarding a minor's access to contraceptive services. However, the Constitution of the United States deals with certain issues which arise in this area and the Supreme Court's interpretation of certain provisions in the Constitution sets rather specific guidelines for the development of the common law as well as for any statutes which might be enacted by the Connecticut legislature.

4. Is there any difference between providing contraceptive services to minors and providing other types of medical treatment to minors?

Yes, because of the federally protected constitutional right of privacy, both adults and minors have a right of access to contraceptive services. The state may curtail this access, in the case of an adult, only by showing a *compelling* state interest which justifies limitation on this right. In the case of a minor, the state must show a *significant* state interest to curtail general access to contraceptive services. Other types of medical treatment do not necessarily fall within this constitutionally protected right of privacy.

The United States Supreme Court on June 9, 1977 . . . discussed several issues which arise in the area of contraceptive services. It struck down a New York law which, among other things, made it a crime for anyone other than a licensed pharmacist or physician to distribute contraceptives to anyone and which made it a crime for any

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EDITOR'S NOTE: *Legal references are available upon request from: Zero Population Growth, Inc., Connecticut Chapter, 55 Elmwood Road, New Haven, CT 06515.*

This statement was a project of the Connecticut Chapter of Zero Population Growth. The paper was prepared by David W. Schneider, J.D. of the New Haven Bar, with research assistance from Betty Glenister. (Nov. 1977) person to sell or distribute any contraceptive of any kind to a minor under the age of 16 years.

In making its decision, the majority of the court reviewed the cases dealing with the constitutional right to privacy, and it held that: "The decision whether or not to beget or bear a child is at the very heart of this cluster of constitutionally protected choices." The court further held that any regulation imposing a burden on a decision to prevent contraception must be justified, in the case of an adult, only by compelling state interests. Based on this reasoning, the court struck down the requirement that only a licensed pharmacist or doctor could distribute contraceptives.

The court also struck down the prohibition against selling or distributing any contraceptive to a minor. Although a majority of the court was unable to agree on the same reason for striking down this state requirement, four of the nine Justices stated that state restrictions inhibiting the privacy rights of minors are valid only if they serve a significant state interest. Those Justices found that the complete prohibition on the distribution of contraceptives to minors did not forward any significant state interest. Those Justices did permit the state somewhat greater latitude in regulating the distribution of contraceptives to minors, than to adults, because they felt that minors have a lesser capability for making important decisions. In general, however, the court affirmed that minors have constitutional rights, among them the privacy right to determine whether or not to beget or bear a child, which the state can restrict only upon showing a significant reason for doing so.

5. What are the primary grounds for claims of malpractice against a physician?

Although there are several theories which may be advanced against a physician in a claim for malpractice, the primary ones are for negligence and for an assault and battery (the touching of a person without consent). The legal theories of negligence and assault and battery apply to all types of medical malpractice, including the provision of contraceptive services.

> Malpractice based upon negligence means that the physician has failed in some manner in his treatment of a patient and his failure has been the result of his breach of his "duty to his patient to exercise that degree of care, skill and diligence which physicians in [Connecticut] and in the same general line of practice ordinarily possess and exercise in like cases." *Fitzmaurice* v. *Flynn*, 167 Conn. 609 (1975).
>
> An assault and battery is based upon the fact that any touching of a person's body, however, minor, in the absence of an emergency (Conn. Gen. St.), can be the basis of a medical malpractice action, if said touching has not been with the patient's informed consent. . . .
>
> Other legal theories for medical malpractice do not arise with the same frequency as those of negligence and assault and battery.

6. How likely is it that a physician will run into legal problems in providing contraceptive services to a minor?

Justice Stevens of the United States Supreme Court, in a recent opinion, cited a study which stated that the authors were aware of "no case in which either a doctor or a layman has been successfully prosecuted under any criminal statute for providing contraceptive information or services to a minor or has been held liable for damages for providing contraception to a minor without parental consent."

> Obviously, this does not mean that there never has been or never will be any successful claims in this area; however, it does tend to show that they are not likely.

7. What is informed consent?

Informed consent, so that a physician will not be liable for an assault and battery for touching the body of a patient, means that the patient has been given sufficient information concerning just what will be done and its consequences so that the patient can consent to the treatment (the touching).

> The majority of the United States Supreme Court (1976) . . . in a case dealing with, among other things, parental consent to abortions, defined informed consent as the giving to a patient of information as to just what would be done and as to its consequences. The court also stated that to require the physician to do more would put the physician in an undesirable and uncomfortable professional position.

8. Can a minor give informed consent?

Certain minors are able to give informed consent. These appear to include the so-called emancipated minor, or one who is free of parental control and domination, and it also includes, at least in the area of contraceptive services, the "mature minor." The mature minor is one who is sufficiently intelligent and mature enough to understand the nature and consequences of the proposed treatment.

> The common law doctrine of an emancipated minor is of long standing. An emancipated minor is generally defined as one who is no longer under the control of his parent because of express or implied action of the parent in removing his control. . . . It has been held in other states that an emancipated minor may consent to medical treatment for his or her benefit, although the Connecticut courts have not ruled on this point.

The doctrine of the "mature minor" arose within the context of Supreme Court decisions in the area of abortion and other contraceptive services. The mature minor does not depend upon the chronological age of the person but more on his or her ability to understand and be aware of the consequences of the proposed treatment. It is possible that a minor may be mature enough to consent to treatment for various types of temporary contraceptive devices, but not be mature enough for other decisions, such as a permanent sterilization. . . . In a 1976 decision, the court took pains to point out that not every minor can give effective consent and that age and maturity must be considered as well. Justice Stewart, in a concurring opinion in that case further emphasized that the state may require the abortion decision of minors to be knowing, intelligent and voluntary. In (1976) . . . a unanimous United States Supreme Court stated that the mature minor is one capable of giving informed consent, but it pointed out that with minors there are unquestionably greater risks of inability to give informed consent than there are with adults.

9. What should the physician do to ensure that he has obtained the informed consent of a minor?

As with any patient, the physician must take the time to explain, in language which the patient can understand, the details of the type of treatment which he is going to give to the minor and the possible consequences of that treatment. He should also take steps to make certain that the minor understands the explanation that is given to him. As with adults, it is useful to keep records detailing the type of explanation given and consent received and, in some cases, it makes sense to obtain a signed consent statement from the minor.

The physician should deal with each patient on a case by case basis. Although it is now clear that a mature minor may give consent to certain types of treatment in the contraceptive field, it is equally true that some adults may be incapable of giving effective consent. The keystone in all cases is to make certain that the patient understands the proposed treatment and its likely consequences. However, in the case of a minor, it is important for the physician to realize that, because of the patient's age, more explanation and detail may be required than true with an adult, who is presumed to have a greater capacity for understanding.

One textbook on the subject . . . suggests that a physician should inform the patient of the diagnosis, the general nature of the contemplated procedure, the risks involved, the prospects of success, the prognosis if the procedure is not performed, and alternative methods of treatment, if any.

10. If a patient fails to give informed consent, will the physician always be liable for a touching?

Technically yes, but if there has been no bad result or injury from the unconsented to touching, the patient should be able to obtain nothing more than nominal damages.

Any unconsented touching of the body is an assault and battery for which the law provides a right of action by the patient against the physician. However, unless there is some actual illness or injury resulting from the unconsented to touching, the patient would be entitled to no substantial damages and there would be less likelihood that a civil suit would be brought. However, if there is a serious injury or bad result from an unconsented to touching, large damages could be awarded, even if the physician was not negligent in his treatment. Also, informed consent is not a defense to a claim of negligence against a physician.

11. Can a parent successfully sue a physician for providing contraceptive services to his or her child without the parent's consent?

There seems to be no legal basis for a claim by a parent for any damages which the parent might feel he or she has suffered personally as a result of not giving consent. However, a parent can sue as a representative of a minor child for damages which the child himself or herself might have suffered. Also, the parent has a direct right of action to recover for any necessary medical care which he or she provided for his or her minor child.

Since it is rather clear that parental consent, as such, is not required before providing contraceptive services to every minor, it would appear that a parent has no right to sue on any claim that the parent was directly injured because he or she was not consulted by a physician who provided contraceptive services to his or her child. However, a parent can sue as the representative of a minor child for any damages which the child may have suffered. Therefore, if a child has a right of action against a physician for damages arising out of the provision of services without the informed consent of the child, the parent would be the actual person suing. However, the suit would be on behalf of the child and any recovery would be for the benefit of the child. Also, whenever a parent provides necessary medical care for his or her minor child, the parent is entitled to recover directly from the one responsible for the fact that the parent had to provide medical care. (Conn. Gen. St.) Thus, if as a result of contraceptive treatment for a child, the child incurred medical expenses which were paid for by the parent, the parent could sue directly to recover for those expenses.

12. Is parental consent necessary before contraceptive services can be provided to a minor?

No, not if the minor is capable of giving effective consent in his or her own behalf.

There is no statutory requirement in Connecticut for parental consent in the area of contraceptive services. Furthermore, any such blanket requirement would be unconstitutional. In a 1976 decision, the United States Supreme Court dealt with a Missouri statute which required parental consent before an unmarried minor could obtain an abortion. The Supreme Court held that this was unconstitutional, given the constitutional privacy rights of minors. The Court held that the parental interest was no more weighty than the right of privacy of a competent minor mature enough to have become pregnant. Although the State of Missouri argued that the requirement of parental consent was a significant state interest because of the state's interest in safeguarding the family unit and parental authority, the court held this not to be the type of state interest which would outweigh the minor's right to privacy. In a 1977 case, the Supreme Court reasoned that there could also be no blanket requirement of parental consent for the distribution of contraceptives to minors. If parental consent is not required for abortions, it would follow that it could not be required for less serious types of contraceptive services. It should be noted that Connecticut might be able, although it is not yet tried, to require parental consultation before the provision of contraceptive services. The Court has held . . . that a Massachusetts statute might not be unconstitutional, if it merely required parental consultation and consent before an abortion on a minor, provided that if the parental consent was not given, a judge would be able to order the abortion, without parental consent, if good cause were shown. The implications of the Court's decision in that case are not yet fully known; however, Connecticut has not yet attempted to make any such parental consultation a requirement in the area of contraceptive services.

In a case arising in Connecticut . . . the United States District Court held unconstitutional a Connecticut state regulation that required the consent of the Commissioner of Children and Youth Services before a minor ward of the State could obtain an abortion (1976).

13. Must a physician inform a parent that he is providing contraceptive treatment for his or her minor child?

There in no such requirement in Connecticut.

As pointed out in 12, Connecticut has no requirement of consultation with a parent before providing a minor with contraceptive services. It is a question whether or not a physician could so consult with or inform the parents, about providing contraceptive services, without his minor patient's consent. On one hand, the minor child would be in a position to claim that the physician breached his duty of confidentiality to his minor patient if he consulted with a parent concerning provision of contraceptive services to the child. On the other hand, the Supreme Court tends to indicate that it would not be improper for a physician to consult with the parents, if there is a narrowly drawn statute requiring it. However, since Connecticut has no such law, it appears that the confidentiality of the patient-physician relationship should be given priority, if the patient is a "mature minor."

14. Must a physician obtain the consent of a spouse before providing contraceptive services?

No, assuming that the patient can give informed consent himself or herself.

The Supreme Court has also struck down a Missouri requirement of a spouse's consent to an abortion. It did so on the grounds that it was unconstitutional for the state to give the spouse a veto power which the state itself could not impose. Thus, for the provision of other types of contraceptive services, it would appear that the consent of the spouse cannot be a requirement, and, absent the patient's consent, informing the spouse could be a breach of confidentiality between the physician and patient.

15. Are the physician's obligations in dealing with a patient in the provision of contraceptives any different if the patient is married or unmarried?

No.

In *Eisenstadt* v. *Baird,* (1972), the U.S. Supreme Court dealt with the issue of whether or not a state could prohibit contraceptives to unmarried persons, even though it had been established that it was unconstitutional to prohibit contraceptives to married adults. The court rejected the distinction between married and unmarried and stated that: "If the right of privacy means anything, it is the right of the *individual,* married or single, to be free of unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child." Therefore, the legal rules are no different when a physician is dealing with an unmarried person than when he is dealing with a married person.

16. Do the general rules concerning the provision of contraceptive services apply in like manner to sterilizations?

Although in general the rules are the same, because of the more serious and long-term nature of a sterilization, certain differences come into play. In particular, the type of maturity necessary for a minor to give informed consent may not be present for a sterilization, even though the minor is mature enough to consent to other types of less serious contraceptive services.

Unlike some states, Connecticut has enacted no specific statutes dealing with sterilization of minors. However, because of the seriousness of sterilization, a physician should be particularly cautious and make certain that he has a minor who is mature enough to understand the consequences of sterilization, before providing such a service. . . . There are a number of cases currently in the courts dealing with the sterilization issue in regard to minors and/or mentally retarded persons. Better guidelines may be developed in this area once future court decisions have been rendered.

There is a specific Connecticut statute which provides, among other things, that a sterilization can be performed only after there has been "legal consent." (Conn. Gen. St.) There is no explicit definition of "legal consent," nor is there any reference to minors in the statute.

Note that the 1978 General Assembly is seriously considering extensive legislation in the area of consent for a sterilization.

17. May the distribution of non-prescription contraceptives be restricted solely to physicians and pharmacists?

In general, no.

Although Connecticut has enacted no specific statutes dealing with the ways in which contraceptives can be distributed, it is clear that the state cannot restrict the distribution of non-medical contraceptives to only physicians and pharmacists. New York had attempted to do this, and it was held to be unconstitutional.

18. Is it permissible to advertise contraceptives?

Although Connecticut has made no attempt to specifically regulate the advertisement of contraceptives, it would be unconstitutional for the state to completely prohibit all such advertisements.

A New York prohibition against the advertisement of contraceptives was held unconstitutional. The court held that there could be no blanket prohibitions on contraceptive advertisements. The Court did indicate that the state could regulate the mere time, place, and manner of contraceptive advertisements and it could prohibit any misleading or deceptive advertisements.

Connecticut does have one statute which prohibits the exhibition of or advertisements relating to the exhibition of still or motion pictures relating to venereal disease in a theater or public hall without obtaining a permit from the Commissioner of Health. Conn. Gen. St. §21-7. It is questionable if this statute remains constitutional.

NEW YORK UNIVERSITY POST-GRADUATE MEDICAL SCHOOL

Sept. 22-24 — CLINICAL ANESTHESIA TODAY (CAT IV) — Fee: $270

New clinical developments in neurologic, obstetric, and neonatal anesthesia; muscle relaxants, neuromuscular transmission; cardiac drugs; special techniques. Includes workshop on cardiac problems (21 hrs. AMA Cat. I; AANA)

Sept. 22-24 — ADOLESCENT MEDICINE — Fee: $180

A wide range of carefully selected clinically oriented topics and workshops for physicians with adolescent patients. (18 hrs. AMA Cat. I; AAFP prescribed hours)

Sept. 25-29 — GENERAL DIAGNOSTIC RADIOLOGY — Fee: $320

A broadly based clinical review of neurologic, urologic, chest, cardiac, GI, bone and joint radiology including CAT scanning. (28 hours AMA Cat. I)

Oct. 18-Dec. 20 — CONSULTATIONS IN INTERNAL MEDICINE — Fee: $350

New departure in clinical problem solving relating exclusively to complex diagnostic problems and therapeutic options in internal medicine. For the experienced internist. (Wednesdays, 4-7 p.m.) (30 hrs. AMA Cat. I; AAFP prescribed hours)

Oct. 19-20 — SHERLOCKIAN DERMATOPATHOLOGY — Fee: $225

Application to dermatopathology and pathology of the methods of deductive and analytic logic practiced by the world's most famous consulting detective—Sherlock Holmes. (14 hrs. AMA Cat. I; 12½ AAD pending)

Oct. 30-Nov. 1 — CLINICAL RHEUMATOLOGY FOR PRIMARY PHYSICIANS — Fee: $240

Intensive clinical course for internists and family physicians. Lectures, case studies and workshop on physical diagnosis. (21 hours AMA Cat. I; AAFP prescribed hours)

Oct. 21-22 — ROBERT S. HOTCHKISS SYMPOSIUM - MALE INFERTILITY — Fee: $200

An update on the science underlying a rational clinical approach to diagnosis and treatment of male infertility problems. (14 hours AMA Cat. I)

Oct. 28-29 — OFFICE MANAGEMENT OF COMMON ORTHOPEDIC PROBLEMS — Fee: $180

For emergency room and primary care physicians. Emphasis on approaches to neck and shoulder pain, low back pain and disc disease, common fractures, the painful knee and sprained ankle. Treatment workshops in splinting, casting, strapping. (14 hours AMA Cat. I: ACEP; AAFP prescribed hours)

Nov. 2-4 — ECHOCARDIOGRAPHY — Fee: $160; $80

Nov. 2, 3 - An introduction to fundamentals for better understanding of indications, limitations and interpretation of echocardiograms in the clinical literature and patient records. *Nov. 4* - Intensive practice sessions on interpretation of echocardiograms using the case study method and self assessment evaluations. (21 hours AMA Cat. I; AAFP prescribed hours)

Dec. 2-3 — PRACTICUM IN PSYCHIATRY AND THE CRIMINAL LAW — Fee: $160

For psychiatrists who may function in the legal arena: tests of competency, insanity as a defense, presentence consultation and the psychiatrist as expert witness. (14 hours AMA Cat. I)

Dec. 7-8 — DIAGNOSIS OF MUSCULAR DISEASES — Fee: $160

Intensive practical review of essential methodology and advanced techniques in the diagnosis of neuromuscular diseases for neurologists, neurophysiologists and physiatrists. (14 hours AMA Cat. I)

Dec. 11-12 — CLINICAL ELECTRODIAGNOSIS OF NEUROMUSCULAR DISEASES — Fee: $160

Presents advanced and unusual techniques of electromyography and nerve stimulation studies. For clinical neurophysiologists, neurologists, neurosurgeons, orthopedists and physiatrists. (14 hours AMA Cat. I)

Dec. 9-10 — PSYCHIATRY FOR PRIMARY CARE PHYSICIANS — Fee: $185

Identification and management of crisis and emergency situations in office practice: depression, anxiety attacks, acute psychotic states, hysteria, psychosomatic complaints, suicide threats and drug abuse. Guidelines for using common psychoactive drugs. (14 hours AMA Cat. I; AAFP prescribed hours)

Dec. 11-15 — NEUROSURGERY/NEW YORK CITY 1978 — Fee: $385

Combines the resources and faculties of the Departments of Neurosurgery in the seven NYC medical schools. Features state-of-art lectures, clinical presentations, video-tape programs on operative techniques, informal sessions with faculty and a program at the Neurological Institute (Columbia). (34 hours AMA Cat. I; PRA in Neurosurgery)

Jan. 3-May 30, 1979 — INTERNAL MEDICINE - AN IN-DEPTH REVIEW — Fee: $485

A sophisticated, current review of internal medicine. Major attention to disease mechanisms and advances in diagnosis and therapeutics with heavy clinical orientation. Helpful for ABIM and AAFP exam review. (Wednesdays, 4-7 p.m.) (66 hours AMA Cat. I; AAFP)

INFORMATION

Fees and dates subject to change. For information or course brochure, write or phone: Registration Dept., NYU Post-Graduate Medical School, 550 First Avenue, New York, NY 10016. 212-679-8745 (24 hr. telephone)

Aging: A Challenge to Medicine

ROBERT N. BUTLER, M.D.

Aging: A Challenge to Medicine

The health care system and other vital American institutions were not prepared for the demographic revolution of the 20th Century that saw the population of older Americans grow seven-fold while the general population only tripled.

This human triumph of increased life expectancy is clouded by the situation created because the nation was not prepared for a "sudden" increase of citizens 65 and older—from 3 million in 1900 to 23 million today.

The major task before the nation is to adapt its social institutions to the needs of older people while, at the same time, it meets the needs of the younger population.

The prospect of the older population growing to 30 million by the year 2000 poses an especially serious challenge to the health care profession—from the "pure" research scientist in the laboratory to the practitioner in his consulting room.

The profession is ill-prepared to meet that challenge, as indicated by a lack of training in geriatric medicine—not even fundamental education in this field is offered by American schools of medicine.

A survey of 99 medical schools in 1970, for example, found that 50 made no mention of geriatrics in their offerings. And, of the nation's 114 medical schools, only 32 offer electives in the subject.

Until January of this year the nation in which one out of every 10 citizens is 65 years of age and older had not a single endowed chair in geriatric medicine. Today, there is one—the Irving Sherwood Wright Professorship in Geriatrics at the New York Hospital-Cornell Medical Center in New York City.

Let us hope that establishment of that chair, by a $1 million endowment from the Gladys and Roland Harriman Foundation, signals a new academic emphasis and that the Wright Professorship is the first in a series of similar teaching and research positions to provide needed leadership in geriatrics throughout the country.

Medical education today is marked by serious shortcomings: No medical school requires that all its students receive part of their training within nursing homes, long-term care institutions, or in home-care programs. There are but two formal medical school training programs in geriatric medicine and very few centers in which any sort of training for research in clinical gerontology can be obtained. In other words, medical students get little or no sophisticated teaching regarding the medical problems of the elderly. This lack is reinforced by a prejudice toward the aged often displayed by teaching and practicing physicians.

The obvious conclusion is that the medical profession, as represented by its educational establishment, is not preparing itself to serve a rapidly growing population with special needs for health care that become more pressing every year.

There are indications that the general public is moving ahead of the medical profession in recognition of the special problems of the elderly and in taking action to solve them. Congress, as representative of the people, established the National Institute on Aging (NIA) as the 11th of the National Institutes of Health after finding that: "No American institution . . . has undertaken comprehensive systematic and intensive studies of the biomedical and behavioral aspects of aging and the related training of necessary personnel."*

The Institute, which began operations last year, sees its main role as correcting this lack by supporting a comprehensive program of research and training on the variety of factors—biological, medical, social and behavioral—which contribute to the aging process. This research program is intended to produce the knowledge needed to prevent, modify or reverse the harmful aspects of aging and enhance the quality of the later years.

Institute scientists are working to distinguish aging from disease; identify the normal biological changes that accompany aging; understand the relationships between the aging process the diseases related to advanced age; determine psychological and social phenomena that contribute to and accompany changes with age; and develop the diagnostic, treatment and preventive procedures to apply this knowledge.

Research lies at the heart of solving such questions because, whether it is called basic or applied, research is the ultimate service. A comprehensive research plan was prepared by the Institute for the Department of Health, Education, and Welfare and presented to Congress, at its direction, earlier this year. The plan, entitled *Our Future Selves: A Research Plan Toward Understanding Aging is designed* to focus the resources of the government on all aspects of aging.

ROBERT N. BUTLER, M.D., Director of the National Institute on Aging, Department of Health, Education and Welfare, Public Health Service, National Institutes of Health, Bethesda, MD.

*Research on Aging Act of 1974 (P.L. 93-296)

We recognize that research alone cannot accomplish the objective of a healthier and stronger older population, but the plan was offered as a reasonable and reasoned promise of a major endeavor to comprehend the nature of aging and its associated ills, with the ultimate aspiration of a more decent and dignified old age.

Far too many people, including professionals, see old age primarily as a time of chronic illness, failing mental abilities, dwindling bank accounts and stagnation. The vision of the plan extends beyond these concerns to the positive aspects of aging. Therefore, two basic ideas underlie the recommendations of the plan:

- Effective programs for the aged—whether medical or social, treatment or prevention—must be based on knowing which changes in the aged are intrinsic to the aging process and which are not.
- If we are able to prevent or lessen the impact of non-intrinsic factors in the decline of the aged, then we are left with a unique and more satisfying concept of what aging is or should be—a natural stage in human development leading to a gradual and peaceful end.

Through research, and with the support of medical schools and physicians, knowledge can be increased and applied to serve the elderly.

The readiness of the medical community to join in this effort was indicated by a survey of practicing physicians, reported in the AMA's *IMPACT* (September, 1976), in which 75 percent of respondents answered affirmatively to the question: "Do M.D.'s need special training in geriatrics?" Such training would, for example, make more physicians aware that in the later years multiple disorders are present as the body's protective mechanisms are compromised. Sumptoms present differently in the old and the untrained clinician often misses the diagnoses:

- An older person with hyperthyrodism may appear apathetic, not hyperactive.
- Tuberculosis may proceed in silence.
- Appendicitis may occur without the characteristic abdominal tenderness at McBurney's point, without fever, and without an elevated white count.
- An older person may have a heart attack without chest pain and may instead appear confused, disoriented and seem like the victim of a stroke.

In the area of drugs, most practitioners have at some time been distressed by the adverse and often paradoxical reactions and inter-actions that occur because of multiple drug use by older people. Even so, the classic Goodman and Gilman textbook does not even have the word "age" in its index. Beleaguered by many other demands, the Food and Drug Administration has never really concentrated on the special variables of age, despite our knowledge that with age and with the severity of disease, the impact and the acute and long-term toxicity of drugs is altered. We know far too little about the age- and disease-related effects of the 1,500 different drugs prescribed each year. For example:

- The dosage of the anticoagulant warfarin needs to be lessened when given to a person taking chloral hydrate.
- There is a greater risk of bleeding when heparin is administered to women.
- There appears to be a link between reserpine and breast cancer in women.
- Diazepam causes excessive drowsiness with age.

Learning more about various medications and their age-related effects is one type of basic research appropriate for the NIA. We need wise prescription guidelines in our work with older people, but first we need the scientific knowledge to enable us to develop such guidelines.

The special effect of diet on the condition of the elderly is not well enough understood. Nutrition has been shown to be the only environmental factor to increase the life span in animal model systems. Unfortunately, the nutritional status of aged persons is often poor. Under-nutrition can be the key to an array of pathologies, such as intellectual confusion (so-called senility), and anemia, which could be reversed if adequate nutrition were provided. However, what constitutes "adequate nutrition" for aged persons is not fully known.

Most information on nutritional needs is based on research with children and young adults. But, because of changes in the physiology of the aged, such information is not likely to be applicable to the needs of this group. It would be of tremendous benefit to the aged to have valid guidelines for their nutritional requirements, including the need for vitamins, trace elements, fats, carbohydrates and proteins.

The Institute actively seeks the support of the medical community and public and private agencies to increase the total resources available to accomplish its research goals and to bring the old into the mainstream of American medicine.

Opinions and Reports of the AMA's Judicial Council

Communications Media: Standards of Professional Responsibility

A. Each medical society should consider appointing a communications committee, or designating a responsible individual or individuals, whose duty would be to provide the communications media with accurate information on all medical matters of interest to the public. This information should be given freely. The communications committee may also serve in an advisory capacity to all communications media and to all physicians of its society in questions involving relationship with the media. To assist the media in obtaining information, medical societies may furnish the media with a list of names of physicians from whom authoritative information may be obtained, or a designated individual may serve as liaison between the media and the profession and furnish names of physicians to provide authoritative information when required.

These spokesmen may be quoted by name and title. This should not be considered by their colleagues as solicitation, since it is done in the best interest of the public and the profession. They may ethically provide appropriate information regarding medical and public health matters which have been discussed in technical papers or during medical meetings.

The officers, committee chairmen, and designated spokesmen of medical societies should be available at all times to bona fide representatives of the communications media in order that authentic information may be obtained as soon as possible.

B. Because certain news is a part of the public record or is a matter of concern to civil authorities, it is readily available for publication. Physicians should cooperate with the press to insure that medical news of this sort is available more promptly and more accurately than would be possible without their assistance.

News in this category, known as news in the public domain, includes: births, deaths, accidents, and police cases.

The following information in the public domain can be made available without the patient's consent:

(a) Personal information: patient's name, address, age, sex, race, marital status, employer, occupation, name of parents in case of births, name of next-of-kin in case of deaths.

(b) Nature of accident:

Only general information regarding injuries will be released. This consists of the name of the injured portion of the body, such as back injury and the like. It may be stated that there are internal injuries. If the patient is unconscious when brought to the hospital, a statement to that effect may be made. Statements regarding the circumstances surrounding shootings, knifings, and poisonings are properly police matters, and questions whether they were accidental or otherwise should be referred to the appropriate authorities.

A statement may be made to the effect that the patient was injured by a knife or other sharp instrument, but no statement may be made as to whether or not it was assault, accident, or self-inflicted.

A statement may be made that the patient received burns and the member of the body affected may be indicated.

No statement may be made that there was a suicide or attempted suicide.

No statement may be made to the effect that intoxication or drug addiction was involved.

No statement may be made that moral turpitude was involved.

(c) Diagnosis and prognosis:

Inasmuch as a diagnosis may be made only by a physician and may depend upon X-ray and laboratory studies, no statement regarding diagnosis should be made except by or on behalf of the attending physician. For the same reason, prognosis will be given only by the attending physician or at his direction.

(d) Patient's condition:

A statement may be made as to the general condition of the patient using the following classifications: minor injuries or similar general diagnosis, good, fair, serious, critical.

C. When information concerning a specific patient is requested, the physician must obtain the consent of the patient or his authorized representative before releasing such knowledge. The patient's decision is final under the law. A physician may, within the limits of good taste, encourage the patient or his family to state the cause of illness, or the cause of death, when this information is requested by a bona fide representative of the press. Where a person of public interest is involved and the release of information has been authorized, the physician may arrange for regular bulletins concerning the person. The ethical physician will use restraint and good judgment regarding the use of his name in connection with such published reports.

D. Publication of photographs of physicians, who appear before recognized medical organizations, either in the official program of the scientific meeting or before the public press in connection with such meeting, is permissible. The use of photographs in the press when physicians are elected to office or when physicians are quoted by name on matters of general interest, not related to the care of a specific patient, is likewise permissible. Photographs of physicians in connection with civic or social affairs, not related to medical news or the care of patients, may be published unless the frequency of such photographs bespeaks self-exploitation. This applies also to magazine articles. Physicians may wish to clear such publicity, whenever possible, with their county society.

E. The promise of radical cures or boasting of extraordinary skill or success is considered unethical by the medical profession because it is contrary to the best interest of the public.

F. For purposes of clarity, the following principles should guide physicians who appear on TV or radio programs or who are interviewed in other media of public information, such as newspapers and magazines:

(a) Physicians are expected to refrain from sponsoring products directly or by implication.

(b) When introduced as a physician on TV or radio programs or quoted in an article as a physician in newspapers and magazines, such individual cannot escape the implication of representing the medical profession and his conduct should be in keeping with the high standards of the profession.

(c) Sound judgment and good common sense are expected of any physician when appearing on TV or radio programs or in other media of public information, such as newspapers or magazines, in whatsoever capacity.

G. Members of medical society speakers bureaus, because of the very nature of their assignments, may be interviewed or quoted by the communications media. This is not considered unethical conduct.

The members of these committees must uphold the ideals of the medical profession.

H. The Judicial Council construes Section 10 of the Principles of Medical Ethics as encouraging physicians to work with the communications media as an integral and important part of the principle of upholding the responsibility of the physician to society as a whole.

I. Physicians are ethically and legally required to protect the personal privacy and other legal rights of patients. The physician-patient relationship and its confidential nature must be maintained. With these considerations in mind, the physician may assist the representatives of these media in every way possible.

Discipline and Medicine

A physician should expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession. Questions of such conduct should be considered, first, before proper medical tribunals in executive sessions or by special or duly appointed committees on ethical relations, provided such a course is possible and provided, also, that the law is not hampered thereby. If doubt should arise as to the legality of the physician's conduct, the situation under investigation may be placed before officers of the law, and the physician-investigators may take the necessary steps to enlist the interest of the proper authority.

An ethical physician will observe the laws regulating the practice of medicine and will not assist others to evade such laws.

The Judicial Council cannot pass judgment in advance on a situation that may later come before it on appeal. The Judicial Council cannot be an attorney for a society or a member thereof and later judge in the same factual situation. The component medical society has the initial obligation of determining whether or not the action described constitutes an infringement of the Principles of Medical Ethics. Questions asking for a review of a proposed course of action or an evaluation of an existing factual situation should be presented to the appropriate official of the physician's component society.

Drugs and Devices: Prescribing

It is unethical for a physician to be influenced in the prescribing of drugs or devices by his direct or indirect financial interest in a pharmaceutical firm or other supplier. It is immaterial whether the firm manufactures or repackages the products involved.

It is unethical for a physcians to own stock or have a direct or indirect financial interest in a firm that uses its relationship with physician-stockholders as a means of inducing or influencing them to prescribe the firm's products. Practicing physicians should divest themselves of any financial interest in firms that use this form of sales promotion. Reputable firms rely on quality and efficacy to sell their products under competitive circumstances, not on appeal to physicians with financial involvements which might influence them in their prescribing.

On the other hand, it cannot be considered unethical for a physician to own or operate a pharmacy provided there is no exploitation of his patient.

The physician is permitted to exercise his own best judgment when caring for his patients. It is known that there will be situations when it is necessary or desirable for a physician to dispense or supply what he has prescribed. The Principles permit this to be done. A physician in the exercise of sound discretion may dispense "in the best interest of his patient;" he may not dispense solely for his convenience or for the purpose of supplementing his income, especially if the drug needs of patients can be adequately met by local pharmacies.

Physicians who enter into agreements with pharmacists in the dispensing of prescriptions in code are guilty of unethical practices and should be disciplined by their local society. It is also unethical for physicians to use prescription blanks with the name of a pharmacy printed thereon. A patient is entitled to a copy of his or her prescription for glasses, drugs, or appliances and he has the privilege of having the prescription filled wherever he wishes.

The principle of free choice applies as well to the choice of a pharmacy. Accordingly, the Council looks with disfavor upon the use of direct telephone lines between a physician and a pharmacist on the theory that a patient is entitled to a written prescription which he can take to the pharmacist of his choice.

Communications Media: Public Figures

Most scientific-medical articles, case studies, case reports, and clinico-pathological reports are based on actual medical experiences with patients. Medicine does not find it necessary to identify these patients. While one need not condemn those who, after the death of public figures, discuss the medical condition of those people while they were alive, respect for the dignity of man, respect for the deceased, and respect for the medical profession strongly suggest that only some clear and meaningful benefit would justify such discussion.

Due Process

The basic principles of a fair and objective hearing should always be accorded to the physician whose professional conduct is being reviewed. The fundamental aspects of a fair hearing are: a listing of specific charges, adequate notice of the right to a hearing, the opportunity to be present and to rebut the evidence, and the opportunity to present a defense. These principles apply when the hearing body is a medical society tribunal or a hospital committee composed of physicians.

These principles of fair play apply in all disciplinary hearings and in any other type of hearing in which the physician may be deprived of valuable property rights. Whenever physicians sit in judgment on physicians and whenever that judgment affects a physician's reputation, professional status, or livelihood, these principles of fair play must be observed.

All physicians are urged to observe diligently these fundamental safeguards of due process whenever they are called upon to serve on a committee which will pass judgment on physicians. Medical societies and hospital medical staffs are urged to review the constitution and bylaws of the society of hospital medical staff to make sure that these instruments provide for such procedural safeguards.

NOTICES

American Cancer Society—Yale School of Medicine
Yale Comprehensive Cancer Center

presents a

Symposium on Pancreatic Cancer
Diagnosis and Treatment
Friday, October 20, 1978

John R. Brooks, M.D.
Professor of Surgery, Harvard Medical School

Morton I. Burrell, M.D.
Associate Professor of Diagnostic Radiology, Yale School of Medicine

Joseph G. Fortner, M.D.
Chief, Gastric and Mixed Tumor Service, Memorial-Sloan Kettering Institute

Birgir Gudjonsson, M.D.
Gastroenterology Service, State University of Sudurgata, Reykjavik, Iceland

Arthur H. Knowlton, M.D.
Associate Professor of Therapeutic Radiology, Yale University, School of Medicine

Philip S. Schein, M.D.
Chief, Division of Medical Oncology, Lombardi Research Center, Georgetown Medical School

Kenneth S. Taylor, M.D.
Director of Ultrasonic Laboratory, Yale University School of Medicine

Enrollment Fee: $10.00
Students and Residents without charge.

Approved for AMA Credit

Contact:
Ms. Marion Morra
Yale Comprehensive Cancer Center
333 Cedar Street
New Haven, Connecticut 06510

Issues in Cardiology—1978

American Heart Association
Fairfield County and South Central Connecticut Chapters

Saturday, September 23, 1978

On Saturday, September 23, 1978, the Fairfield County and South Central Connecticut Chapters of the American Heart Association will sponsor a Symposium for Physicians and Nurses entitled, "Issues In Cardiology—1978." Located at Jake's—Stratford Motor Inn, Stratford, Connecticut, this one day Symposium will present as guest lecturers:

Lawrence S. Cohen, M.D., Professor of Medicine, Yale University School of Medicine; Louis Teichholz, M.D., Associate Chief of Division of Cardiology and Associate Professor of Medicine, Mt. Sinai Hospital, New York, New York; Alexander S. Geha, M.D., Professor of Surgery, Yale University School of Medicine; Patrick McKegney, M.D., Professor of Psychiatry and Professor of Medicine, University of Vermont; Barry L. Zaret, M.D., Director, Section of Cardiology, Yale University School of Medicine.

Registration for the Symposium is $25.00 and will be limited to 200 persons. Advance registrations will close on Wednesday, September 15, 1978, and will be honored in the order received. For further information, contact the Fairfield County Chapter, 15 Bettswood Road, Norwalk, Connecticut or South Central Connecticut Chapter, P.O. Box 1673, New Haven, Connecticut.

ANNUAL REPORTS

OF THE CONNECTICUT STATE MEDICAL SOCIETY

1977 - 1978 *(concluded)*

Committee on Continuing Medical Education

Vincent A. DeLuca, Jr., *Chairman*

Number of Members: 17
Number of Meetings: 4
Average Attendance: 1.5 out of 4

Summary of Activities:

A. Accreditation Site Visits

1) Currently approved institutions—33; 30 acute care hospitals
2) Number of site Visits made in 1977 to:
   1. Hospitals—10
   2. Re-accreditations—5
3) One Day Symposium Accredited—21

B. The Second Conference on Planning CME in community hospitals was held on 5/11/77 from 1-5 p.m., at the University of Connecticut Health Center. Report of the attendance of this meeting, the curriculum and success has been submitted.

C. The "Status of CME in Connecticut"

A comprehensive computerized questionnaire was mailed to all members of the CSMS. A detailed analysis of this questionnaire was made and a report with recommendations was approved by the House of Delegates on 11/17/77 and published in Connecticut Medicine in January, 1978. The recommendation that mandatory CME not be requisite for CMS membership was accepted. A subcommittee is now acting on additional charges which evolved from this questionnaire.

D. Subcommittees

The following subcommittees have been active during 1977:

1) The Subcommittee to plan the Third Annual Conference for 1978. .
   Chairman: Dr. M. Garrell
   Members: Drs. DeLuca, Hinz, Brown, Sheehan, Hamaty
2) The Subcommittee on the Liaison Committee on CME and the Council of State Chairmen of CME (CSCCME).
   Chairman: Dr. C. Hinz
   Members: Drs. Brown, DeLuca, Freedman, Mr. Brunell
3) The Subcommittee on Procedure for Planning a Mechanism for recertification of previously accredited institutions.
   Chairman: Dr. Brown
4) Subcommittee on the Status of CME in Connecticut.
   Chairman: Dr. DeLuca
   Members: Drs. Hinz, Sheehan, Hamaty, Garrell, Mr. Brunell

E. National Council of State Committees on Continuing Medical Education.

The CMS Council voted membership in this organization and issued a grant to the NCSCCME of $200 to help defray the cost of its organization. Dr. Jerome Freedman attended its organizational meeting in Chicago on 12/3/77 and was elected Vice-Chairman.

Observations

It is my contention that if the committee is to carry out the important function throughout the state, of continuing medical education, that the equivalent of a half-time or a full-time person in education would be required.

An expanded range of meaningful charges for this committee can easily be identified, however, unless there is administrative personnel to conduct these activities, it would be meaningless to proceed in that direction. At the present time the committee's activities are primarily supportive at a rather superficial level, of continuing medical education in the state.

Committee on Professional Liability

M. David Deren, *Chairman*

Number of Members: 20
Number of Meetings: 7
Average Attendance: 10 M.D.'s and 4 Guests

Monthly Meetings of the Four Claims Review Panels

Summary of Activities: 1977 was a year of progress for the CSMS-Aetna Professional Liability Program, in that two or more of our legislative goals were

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Injection, 300 mg./2 ml., in single-dose vials in packages of 10.

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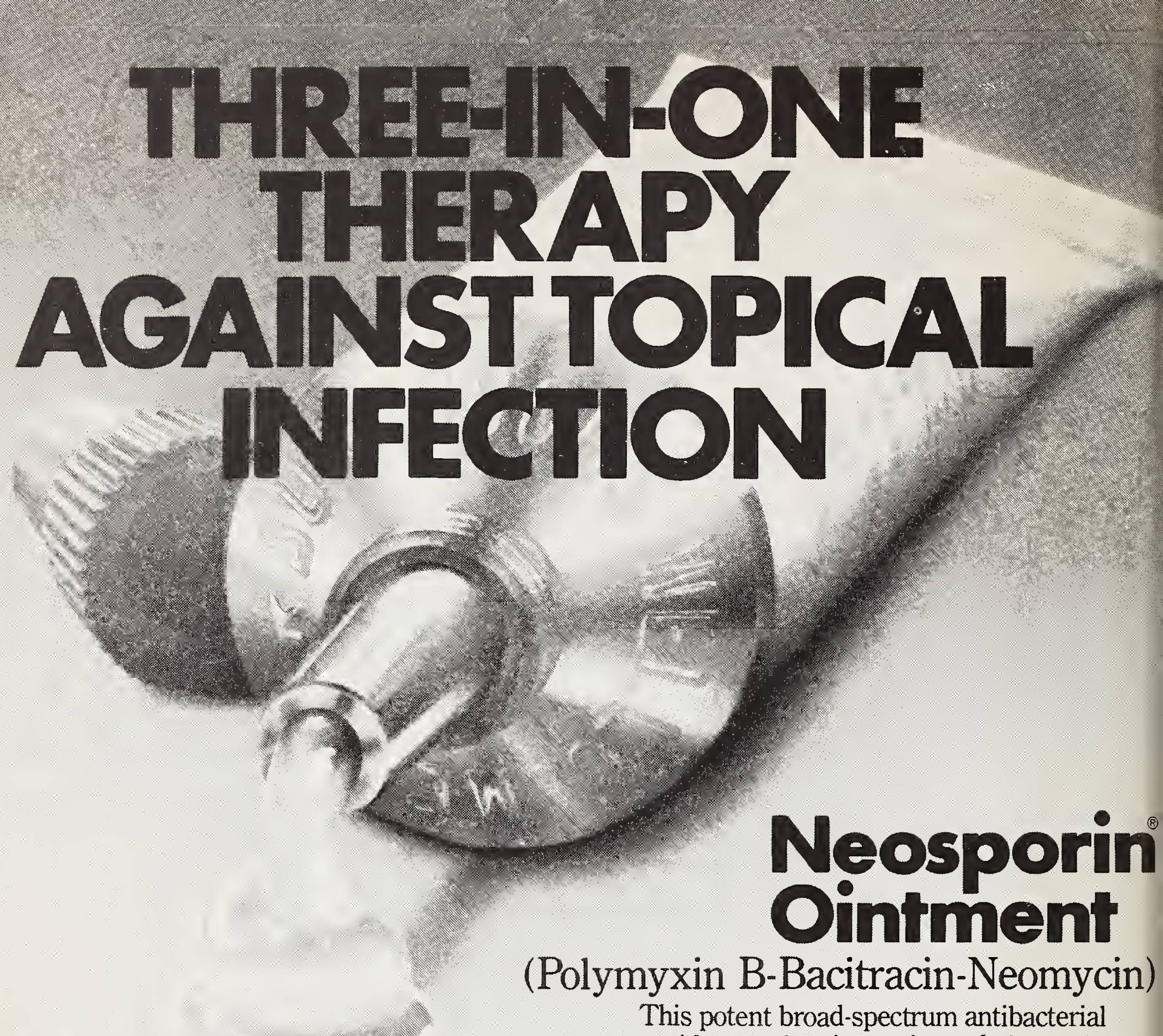

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(Polymyxin B-Bacitracin-Neomycin)

This potent broad-spectrum antibacterial provides overlapping action to help combat infection caused by common susceptible pathogens (including staph and strep). The petrolatum base is gently occlusive, protective and enhances spreading.

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Aerobacter
Escherichia
Proteus
Corynebacterium
Streptococcus
Pneumococcus

Bacitracin
Staphylococcus
Corynebacterium
Streptococcus
Pneumococcus

Polymyxin B
Pseudomonas
Haemophilus
Klebsiella
Aerobacter
Escherichia

In vitro overlapping antibacterial action of Neosporin® Ointment (polymyxin B-bacitracin-neomycin).

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North Carolina 27709

Neosporin® Ointment

(Polymyxin B-Bacitracin-Neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

accomplished, and for the first time since the beginning of the program, the long upward trend of malpractice claims began to moderate. A slight decrease in premiums for many physicians became effective with the new account year beginning October 1, 1977, and the partnership surcharge was reduced from 10% to 5% after spirited consultation between the Aetna and the Committee. At this time, sufficient premium appears to have been collected to keep the 1975-76 account year in the black, unlike the four previous years, which to date have compiled over 3½ million dollars in excess losses over collected premium. Given continued adequate premium income, and continued moderation in upward trends of claim frequency, it can be hoped that these early losses can eventually be offset to the point that the dividend feature of the program can be activated. Since this is a cost-plus program, excess premiums collected, if any, are returned to the policyholders with interest when a given account year is closed out after five years. Meanwhile, Connecticut premiums under this program remain among the very lowest in the nation.

However there is a cloud on the horizon which must darken an otherwise optimistic forecast: Although the incidence of claims made and of lawsuits continues to moderate, the average severity of claims continues to increase at a worsening rate, from $7884 in January, 1976, to $8895 in 1977, and to $9906 in January, 1978. This average includes all claims, even those closed without payment. While part of this increase reflects overall inflation, some of it may be due to a greater selectivity on the part of plaintiff's attorneys. Nevertheless, some order can be seen returning to this tortured market as the CSMS Program begins its unique second five-year period of guaranteed availability from the Aetna.

Current Professional Liability Premiums

The following professional liability rates are in effect for the 1977-78 account year. These figures include primary coverage of $100,000/300,000 for physicians, or $250,000/500,000 for surgeons; office coverage, and $1,000,000 SCOPE umbrella coverage for all:

Class	*10/1/76*	*10/1/77*	*% Change*
I	$1021	$1023	+0.2
II	1754	1714	-2.3
III	3173	3239	+2.1
IV	4192	4173	-0.5
V	5212	5189	-0.4
VI	6231	6203	-0.4
VII	8270	8231	-0.5

Summary of Claims by Specialty

The following is a summary of claims by specialty from 10/1/71 to 3/31/76 and to 12/31/77. This reflects only the number of claims, not severity.

Specialty	*to 3/31/76*	*%*	*to 12/31/77*	*%*
Allergy	—	0	2	0.2
Anesthesiology	74	13.9	112	12.8
Cardiovascular Surgery	1	0.2	6	0.7
Dermatology	1	0.2	2	0.2
ENT	24	4.5	31	3.5
Family Practice	69	13.0	89	10.1
Gastroenterology	3	0.6	7	0.8
General Surgery	60	11.3	96	10.9
Internal Medicine (includes Cardiology)	41	7.7	71	8.1
Neurology	4	0.8	9	1.0
Neurosurgery	15	2.8	32	3.6
OBS-GYN	93	17.5	146	16.6
Ophthalmology	13	2.4	34	3.9
Orthopedic Surgery	52	9.8	97	11.1
Pathology	2	0.4	2	0.2
Pediatrics	4	0.8	9	1.0
Plastic Surgery	7	1.3	12	1.4
Psychiatry	11	2.1	16	1.8
Radiology	31	5.8	49	5.6
Thoracic Surgery	9	1.7	14	1.6
Urology	21	4.0	39	4.4
Vascular Surgery	—	0	2	0.2
Total	531		877	

Joint Loss Control and Education Program

The keystone of the CSMS-Aetna Joint Loss Control and Education Program continues to be the four District Review Panels, meeting almost monthly, and involving some 500 CSMS physicians, who contribute their time and expertise to arriving at invariably objective judgments as to the possibility of negligence on the part of defendant physicians. Besides the obvious and inestimable value to the Counsel for the Defense, our panelists cite the experience as educational to their own understanding of the malpractice problem. There has been an overwhelming response from physicians to serve on the claims review panels. We are most appreciative of their service to the Society and to the practice of medicine. In order to involve additional members, the New Haven County, the Fairfield County and the Hartford-Litchfield-Tolland County Panels were partially rotated as scheduled last year.

For its part, the Aetna continues to plan and implement in-hospital education programs and to develop new audio-visual materials dealing with such subjects as informed consent, medication errors, patient identification, and other areas of vulnerability. All these resources are available for the use of our members.

Legislation—The two bills passed by the State Legislature last year and signed into law were the long-sought elimination of the Ad Damnum Clause in writs alleging malpractice, and the establishment of voluntary non-binding pre-trial screening panels for malpractice cases. Since October, no malpractice writ has cited a dollar amount of damages sought for a malpractice allegation which, four times out of five, is not upheld by the court. Hopefully this will eliminate some of the unjustified and damaging public notoriety surrounding such suits. With respect to the screening panels, CSMS has already complied with the request of the Insurance Commissioner to supply him with the names of twenty Connecticut physicians who will be available to sit on such panels, consisting of two physicians and one attorney. In addition to these new laws, CSMS legislative efforts were successful in helping to defeat a number of highly objectionable bills which would have drastically worsened the malpractice climate in our state.

Two other bills whose passage was not achieved last year have again been introduced and raised by the Committee on Insurance and Real Estate. These are: a bill to permit discovery of collateral sources of reimbursement in malpractice cases, and a bill that would provide that awards in excess of $100,000 be paid to successful plaintiffs as a lifetime annuity, after payment of lawyers' fees and the plaintiff's out-of-pocket expenses. This latter bill would be of particular benefit to handicapped plaintiffs, who are sometimes left as wards of the state after a substantial award is dissipated improvidently. The former bill would permit a court to consider the amount and nature of existing insurance coverage of plaintiffs in setting pecuniary damages, possibly avoiding windfalls beyond actual damages, and preventing dual compensation by the health care system for a single maloccurence loss. Rate-making being the slow process it is, depending on long actuarial experience, this bill would not result in an immediate lowering of malpractice insurance rates, but it would reduce what is now a double cost to the system, without impairing a successful plaintiff's right to just compensation for his injuries. The bill providing periodic annuity payments would serve to prevent the wild swings in premiums that occur when a number of huge awards cluster in a single account year, and to alleviate the unpredictability and instability which has driven so many carriers out of the malpractice insurance market. The status of these two bills is being followed closely by Mr. John F. Pickett, Esq., the Society's new legislative lobbyist.

Policy on Countersuits—After thorough study of the question, last year the committee recommended, and the House of Delegates adopted a policy for the Society's support of meritorious countersuits against "frivolous or flagrantly malicious malpractice suits." The aggrieved physician himself, or with his permission, a Review Panel may request review by the Committee on Professional Liability. When deemed meritorious by the committee, such countersuits will then be supported by the Society. The committee meets annually with the Trial Lawyer's Association.

Aetna has been most cooperative in working with the CSMS committee in improving the various aspects of the malpractice situation.

Cancer Coordinating Committee

Thomas J. Madden, *Chairman*

Number of Members: 12
Number of Meetings: 4
Average Attendance: 6

Summary of Activities

The committee has continued to monitor the activities of several organizations concerned with cancer and cancer patients.

The Yale Comprehensive Cancer Center (YCCC) reported on its efforts to broaden its community outreach. In a series of meetings with health professionals, social workers, educators, and communication media representatives a large number of needs were identified. Meetings are continuing between YCCC staff and community representatives to clarify important issues, marshal resources, and design programs to meet the identified community needs. On December 15-16 a site-visit team reviewed the YCCC program for the National Cancer Institute. Two members of the Cancer Coordinating Committee were present to endorse the efforts of YCCC.

After a two-year period of intensive planning, the proposal for implementation of the Connecticut Community Based Cancer Control Program (CCBCCP) has been submitted to the National Cancer Institute by the Department of Community Medicine of the University of Connecticut Health Center. This detailed plan calls for a many facetted effort to reduce the incidence, morbidity, and mortality of cancer in Connecticut, and to improve the quality of survival of cancer patients. These efforts will be focussed on breast, lung, and colorectal cancer, and will initially be implemented in HSA's IV (Greater Capital Area) and V (Northwestern Connecticut). The planning effort has been exhaustive and detailed, and includes techniques for evaluation of the effectiveness of the overall program and each of its components. The Cancer Coordinating Committee has watched with great interest the development of this proposal. Our former chairman, Dr. E. Tremain Bradley, has had a significant role in the proposal design, and is named to serve as Medical Advisor to the Program Director. If funded, the CCBCCP will operate over a five year period, and will be extended to all five Connecticut HSA's.

The Connecticut State Tumor Registry faces imminent phasing-out of its federal subsidy for hospital tumor registries. The State Health Department is therefore proposing modifications of the Public Health Code which will ensure that medical facilities will provide adequate space, equipment, and qualified personnel for the continued reporting of cancer information. The Cancer Coordinating Committee has endorsed these proposals.

The Connecticut Cancer Epidemiology Unit, the investigative arm of the State Tumor Registry, has been funded to assure operation through mid-1979. It is currently undertaking an investigation of the possible relationship of human bladder cancer to artificial sweeteners. Connecticut urologists will be asked to allow their patients with newly diagnosed bladder tumors to be interviewed for this study.

The committee recognizes the importance of an active cancer program at each hospital, and further acknowledges the vital role that the local cancer registries can play in education, audit, and quality assurance. During the current year we will be attempting to coordinate the functions and goals of hospital registries, the state registry, and the CCEU with the standards which have been set by the American College of Surgeons for hospital tumor registries.

Editorial Committee of Connecticut Medicine

J. Alfred Fabro, *Chairman*

Number of Members: 15

Number of Meetings: 2

Summary of Activities

Preparation of the 1978 Journal budget for the House of Delegates at its last meeting gave the Council and the Editor an opportunity to review the philosophy of the Journal and its role in our Society. A budget is not just money, it represents the purposes and priorities of an organization.

Connecticut Medicine, like most medical journals, is being affected by many factors, particularly inflation and competition for the time of our members from the avalanche of medical material we receive, too much for any physician to absorb even in his specialty. However, we probably do not get enough information about nonscientific health and medical material, both national and state, dealing with issues becoming increasingly important and educational to our members—such as legal, legislative, political, social, ethical, etc.

Practically all the journals we receive are directed to our national readership, specialty oriented if medically based, and for the most part discussing issues of national interest. It is understandable that only rarely do they report issues unique to Connecticut. This is why our Journal should publish as much as possible related to and affecting the practice of medicine in our own state. Though we cannot compete with national or specialty journals in scientific or clinical articles, we can compete in reporting the Connecticut health and medical scene. Recent examples are: (1) abstract of the FTC brief v. the AMA, CSMS, and the New Haven County, (2) abstract of the brief of the AMA, of CSMS and New Haven County v. FTC, (3) the report on Connecticut Medicare B Assignment Rate of Dr. Sidney Cramer's Peer Review Committee, (4) an article on Countersuits in Spurious Medical Malpractice Claims, with special emphasis on Connecticut law. Other areas unique to Connecticut are the Connecticut Commission on Hospitals and Health Care (CHHC), PSROs (four in the state), HSAs (five), Statewide Health Coordinating Council (SHCC), among others. I shall try to publish even more. The greatest difficulty in doing so is that writers knowledgeable about Connecticut medical and health affairs still believe that *Connecticut Medicine* is solely a scientific journal. The contents of the Journal increasingly offer subjects of general medical and health subjects, educational in a broad sense. Most of what I publish in this area result from solicitation.

After some discussion, the Council approved the general format and emphasis of the Journal—(1) Society business, (2) a Nonscientific Section related to Medicine and Health, (3) Scientific Section. Without depreciating the importance of any section, increasing emphasis will be put on, in order of importance, Society business, the Nonscientific Section, and finally the Scientific Section, concentrating especially on subjects about and contributions from Connecticut physicians and institutions. Each section is necessary to further the aims and purposes of our Society in these times.

During the past year, the Connecticut Humanities Council has made a grant to *Connecticut Medicine* in the amount of $7,350. for a section devoted to "Humanistic Studies in Medicine." Stuart F. Spicker, Ph.D., Associate Professor of Philosophy, Department of Community Medicine and Health Care, University of Connecticut Health Center in Farmington, with the Editor will oversee this section. The section will comprise an average of five pages a month in 12 consecutive issues in the Journal; it will be reassessed in a year. This is the only general medical journal that has such a section.

Since our last report, there has been a readership survey of 10 state journals, including *Connecticut Medicine,* by the State Medical Journal Advertising Bureau. Ten journals were selected on the basis of size and geography so as to measure large, medium, and small journals, east, west, north and south. The survey was a one-time mailing made up of a single page questionnaire sent to 200 members in each state (59% in Connecticut answered, the average being 62%). Readership of the issue chosen (July 1977) by our members was 76%, the general average being 77%—considered by Mr. Donald Nichols, Vice President of Journal Sales of Williams and Wilkins Company, to be "extremely well read." Most averages of specific items for the 10 journals were quite similar. For our respondents, of four selected issues the *average* readership of all respondents was 75%; for reading all four, 54%; and for reading at least one of the four, 95%. Eighty-eight percent of our readership survey want to continue to receive the Journal.

Whereas the table of contents on the cover page is helpful and considered desirable by the Editorial Board, advertisers prefer that the table of contents not be on the front cover because it minimizes skimming and looking through the journal for its ads.

In May 1977, the Metropolitan-New York Chapter of the American Medical Writers Association awarded *Connecticut Medicine* the Hammond Award in recognition of outstanding achievement and for excellence in medical journalism.

Connecticut Advisory School Health Council

Leonard Parente, *Representative*

During the calendar year 1977, the Connecticut Advisory School Health Council held six regular meetings and your representative attended five of these meetings.

Summary of Activities

1. On January 20, 1977, Commissioner Frank Maloney, State Department of Children and Youth Services, addressed the Advisory Council. He explained that the former Community Services Division had folded because of lack of funds. However, a new Division of Preventive and Community Services was being developed. This division will be assigned responsibility for mental health education in schools.

Commissioner Maloney asked that a committee on Preventive Mental Health be appointed to advise him what the Department of Children and Youth Services should be doing with the school system in the area of prevention and how they should do it.

Dr. Parente reported that the Connecticut State Medical Society had asked CASHC to look at health education in the schools with an eye toward CSMS's proposing legislation. A committee chaired by Ann Adami had been formed and it reviewed other states' statutes and their quality. The committee recommended the Illinois statute as a model and that CSMS conduct a forum on health education. A CSMS Ad Hoc Committee set up and held the forum on December 9, 1976, and then appointed Dr. Parente and Dr. Foote to write a statute. Using a model that had been recommended by Dr. Carlyon of AMA, who had participated in the forum, Dr. Parente and Dr. Foote modified the wording to fit Connecticut's needs and produced the "Comprehensive Health Education Act," which was introduced by Mrs. Rappaport. At an informal meeting of the Public Health and Safety Committee, Dr. Kenneth Brandon, Chairman of the legislative committee of CSMS, spoke of his group's interest in the bill and pointed out that the current legislation is ambiguous and not adequate. Dr. Parente read highlights of the bill. It was recommended that DCYS be on the proposed Advisory Committee rather than Department of Mental Health. The need to master support among CASHC agencies was brought out. A motion that CASHC encourage member agencies to place discussion of the bill on their agendas and discuss and support it was carried.

2. On February 17, 1977, a special meeting was called to discuss pending legislation of interest to member agencies. Bills related to a mandatory comprehensive health education program in the elementary and secondary schools, smoking, emergency care of bee stings, administration of medication in schools, use of Licensed Practical Nurses as school nurses and the provision of diagnostic and treatment health services in schools were discussed. Various other bills were also brought to the attention of council members, such as licensing of day care centers by the State Department of Health and placing school personnel under the Good Samaritan law.

3. On May 17, 1977, Frank McCarthy, M.D., and Mrs. Ann Petry discussed the successful Health Education Program conducted by West Hartford Public Schools. The program which started in 1968 in 3 elementary schools has expanded to all elementary grades. Materials produced by the 3M Company are used by classroom teachers. Six nurse coordinators serve as resource persons for the program.

Having completed its original assignment, the Bee Sting Committee was reformulated as the Committee on Emergency Care in Schools. This reformulated committee is working with a similar American Academy of Pediatrics committee to prepare emergency care guidelines for use by teachers, principals and school nurses. A policy statement for presentation to the American Academy of Pediatrics School Health Committee in September 1977, and to CASHC in October 1977, is in the process of being prepared.

The Committee on Medicine in Sports, chaired by Frank W. McCarthy, M.D., prepared "Guidelines from the Committee on Medicine in Sports in the Inter-scholastic Area" and included a suggested health examination form, a suggested return to play form and a suggested sports candidates' questionnaire. A statement on the role and function of the athletic trainer was prepared as an attachment to the guidelines.

The Child Abuse Committee prepared a fact sheet on child abuse. This statement was approved for forwarding to the commissioners for distribution to all schools by October.

4. The meeting on May 19, 1977, was devoted to committee reports.

The Committee on Bee Sting Allergy, co-chaired by Ann Adami, R.N., and Martin W. Sklaire, M.D., met jointly with the Emergency Care of Bee Sting Allergies Committee of the American Academy of Pediatrics, Hezekiah Beardsly Chapter, and the State Department of Health Director of Public Health Nursing Division to look into new legislation and changes in regulations that would allow school principals and teachers, with special training, as well as school nurses to give medication by injection, particularly as a life saving measure to control anaphylactic shock due to allergy to bee, wasp and other insect venom.

As a result of the joint committee's recommendation, appropriate legislation (HB 5920) was passed and the Public Health Council approved new regulations in order that understanding orders of the school medical advisor and with approval of the local Board of Education as well as with proper training, medicines may be given by injection by selected school personnel.

In addition, the Good Samaritan law (SB 133) was extended to cover school personnel who provide emergency aid while engaged in a school related activity. This law protects persons who are properly trained from civil liability for ordinary negligence in giving emergency care.

5. At the October 20, 1977 meeting, legislative changes that were passed during the 1977 General Assembly were discussed.

Administration of Medicines in Schools—Mrs. Lundquist from the State Health Department reported that the change in this regulation occurred due to the concern for the care of children allergic to bee stings and insect bites. The regulation was changed in June 1977. It was not necessary to change the statutes. The change permits the administration of medicinal preparations to a student through injection. However, the need for specific training is mentioned. A circular is being prepared in relation to the regulation and guidelines under the joint signatures of the Commissioners of Education and Health.

Good Samaritan Act—A person must be trained and certified in an approved first aid course to be protected. However, the procedure of giving an injection is not taught in the courses offered by the Red Cross or Heart Association.

In the case of known allergic children an injection can be given under the written order of a physician and the written authorization of the parent. However, in the case of an unknown allergic child the situation is fuzzy. It is possible that the school nurse may be able to give an injection under the school's Policies & Procedures for Safety, First Aid and Emergency Care. This issue is being clarified by legal counsel to the Departments of Education and Health.

Legislation re: Testing for Farsightedness

A proposal was made that the Council petition Commissioner Shedd to clarify the implementation of this law. Passed unanimously.

HB8078—Broadened services available through school medical advisor. Passed.

Prohibition of Smoking in Public Places—All schools received a letter that all classrooms, elevators and public meeting places must be posted as areas of "No Smoking."

P.A. 77-52—If parents refuse to have child immunized against rubella and measles for other than medical or religious reasons the child should be excluded from school.

6. On the November 17, 1977 meeting, Dr. John Lewis, Director, Preventable Disease Division, State Department of Health, discussed the HEW major effort to improve the immunization status of children especially of school age. The State Department of Health will provide free vaccines, including mumps for the first time, technical assistance with clinics and injection guns, surveillance and case control. Combined measles, mumps, rubella vaccine will be used in the lower grades. Rubella vaccines should not be given in the fertile range unless there is assurance of contraceptive measures to prevent pregnancy. Measles immunization does not carry the same risk during pregnancy and should be given to the high school age group.

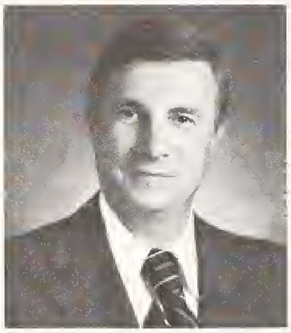
Dr. Lewis explained that certain forms of asbestos can be a health problem and cause cancer. Their concern is about buildings, including schools where asbestos was sprayed on surfaces such as ceilings as a fire retardant, and with time, flakes and falls off. The State Department of Health and Education have produced guidelines that if the substance is asbestos and can flake off or is in an area where it is likely to be exposed to trauma which can cause flaking and if it is exposed to air or in a ventilation duct, it should be removed or covered with a solid material if deteriorating. Only 30 schools were found in Connecticut, none urgent and almost all schools have already made correction. Fiberglass substitutes have been thoroughly tested and so far are not known to cause cancer.

Dr. Siker reported on the status of emergency medical care proposal. There are gaps in the statutes and resources for training that do not provide for the unknown person with a bee sting allergic reaction requiring an injection. An explanatory circular letter will be sent to schools from the Departments of Health and Education.

I wish to emphasize again that the role of the Connecticut Advisory School Health Council is only advisory to the Commissioners of Health, Education, and Child Youth Services.

The President's Page

Regulation of the Costs of Medical Care—An Imminent Danger to Your Patients' Health



Since physicians are being flagellated because of the rapid increases in health care costs, it behooves each of us to understand the problem. Otherwise we may be tempted to discuss the matter in defensive, negative, emotional and often self-serving terms. In large part I base my discussion on the thorough approach of the National Commission on the Cost of Medical Care.

You have heard of the one hundred and fifty thousand dollar minimum which triggers prospective regulatory review of projected capital expenses in health care. But did you wonder, as I did, where this figure came from? Section 1122 of the 1972 amendments to the Social Security Act forbade reimbursement by Medicare and Medicaid for the depreciation and interest of any capital expenditure in excess of one hundred thousand dollars not prospectively approved. To assure this review the National Health Planning and Resource Development Act of 1974 mandated Certificate of Need programs to be functional in all states by 1980. So the number seems to have been determined arbitrarily, aimed at large single expenses and ignoring such other problems as less expensive services which might be heavily used, or over used.

Much emphasis is given to items such as that the replacing of normal hospital beds by coronary care beds caused a $385. increase in the cost per case of myocardial infarction between 1964 and 1971 stated in 1971 dollars. And it is also true that for each such case in the same time period, the average number of laboratory tests increased from 37.9 to 49.5. And as has been emphasized ad nauseum, the day cost of hospital care has been increasing at a rate greater than 15% annually.

But there has been almost total silence about some other aspects of the alleged costs of new technology. And these are such things as the massive strides made in reducing the morbidities and mortalities of such diseases as polio, lobar pneumonia, rubella, tuberculosis and typhoid fever during the 1960's. These reductions certainly overflow into the present. There has not been much attention to the results of longer life spans on costs nor to repeated hospitalizations which result from surviving fatal diseases such as the above or end stage renal disease and coronary artery disease. It seems almost ridiculous to say it, but costs saved are not put into the equations when costs incurred are calculated and criticized. In my own personal experience, in 1963, cataract patients at my renowned university hospital were kept on strict bed rest for thirteen postoperative days at which time the corneal sutures were removed. If the eye was intact, they were discharged on the fourteenth day. Today they are ambulating in 12 hours, have the eye open the next day and are discharged on the second or third day post surgery. About ten hospital days have been saved for each eye. And how much in costs? But this was achieved only with the introduction of the expensive new technology of operating microscopes and incredibly fine and reliable sutures and needles. Expensive as it really was, I know that the technology has been worth it in both cost and quality of results.

The situation on CAT scans in this state is analogous. This technology wholly or partially replaces skull series, with or without subtraction, EEG, isotope scans, and air and dye contrast studies. In testimony to the state legislature this spring, it was pointed out that these studies would cost about $2,000. and carried definite risk of morbidity and mortality. The most expensive CAT study in the state was about $350., non-invasive, almost totally without risk or pain, and did not require hospitalization. And yet it quickly yielded information many times superior to the combined results of what it replaced.

The moral of these stories is that politics is rearing its ugly head in the regulatory process and with expected results. The planners, in their myopic focus on costs do not or will not balance the saved costs of replaced technology with the anticipated costs of the new. In my next communication I shall relate some of the problems of the politics of regulation to show, I trust, that not one of you can hope to hold yourself aloof from or above the politics which impinges on your patients' health more and more grievously month by month.

Jerome K. Freedman, M.D.,
President

Reflections from the Dean's Office

Leisure, an Antidote for Phrenitis

ROBERT U. MASSEY, M.D.

Frenetic (or *phrenetic,* as the British spell it) carries with it a sense of mad or insane activity, even though it is often used with pride to describe a burst of healthy industry. Occasionally a colleague tells me of the "frenetic pace of his work this past year," or the word slips into the minutes of a busy committee; it has been used to describe an intern's life, or the bustle of an academic health center. It may be the best adjective to apply to life in the late twentieth century.

Frenetic shares its etymology with *frantic*, both coming early into the language from the Greek *phrenitikos,* which means someone with *phrenitis,* or inflammation of the brain and its coverings. In all of its older usages, in English and in other languages, it connotes craziness, madness, or delirium. There may be some sense of the visionary or enthusiast, but not much.

Perhaps our century, in comparison with others is afflicted with a kind of madness. Information which four generations ago traveled no faster than the speed of a running horse, now moves with the speed of light in amounts and in detail inconceivable even to my father in his youth. Information calls forth response, in turn generating new conditions which insist upon new responses; related to the phrenitis there seems to be a diminishing capacity to select which information to attend to and which responses to make. You can almost feel the synapses heating up and burning out.

Individuals, institutions, and governments exchange information and decisions so rapidly that responses are only half completed and pile up unfinished on one another before they can get out. Is the analogy to a beehive that has just been thwacked with a broom handle, or to a colony responding to the dance of worker bees who have just discovered a vast field of alfalfa? Are we buzzing frenetically or shouting with joy?

In the academic medical center of the last century life's pace was slower. The telephone was not ubiquitous; beepers were unheard of; the computer and photocopiers were mercifully far in the future, and travelling more than two hundred miles called for careful preparation and the luxury of uncomplicated time.

William Osler described his schedule for writing his textbook in the years between 1890 and 1892. He began work on *Principles and Practice of Medicine* after a summer abroad, *four months* of leisurely travel, a *Studienreise,* which included stops in Freiburg, Basel, Zurich, Munich, Oberammergau and the Passion Play, Heidelberg, Paris, London, Berlin, and a meeting in Washington before returning home to Baltimore in September. He called it his "quinguennial braindusting," and knew that it was necessary for ending or beginning any great enterprise. It was January before he "got well into harness."

"Three mornings of each week I stayed at home and dictated from 8 a.m. to 1 p.m. On alternate days I dictated after the morning hospital visit, beginning about 11:30 a.m. The spare hours of the afternoon were devoted to correction and reference work"—"The routine there was:—8 a.m. to 1 p.m. dictation; 2 p.m. visit to the private patients and special cases in the wards, after which revision, etc. After 5 p.m. I saw my outside cases; dinner at the club about 6:30, loafed until 9:30, bed at 10 p.m., up at 7 a.m."[1]

Here was no *phrenitis.* Compared with how most of us spend our days, this would seem like cloistered peace.

"The best test of the quality of a civilization is the quality of its leisure," Irwin Edman writes at the beginning of his essay, "On American Leisure,"[2] and later describes leisure as "those pauses in our lives when experience is a fusion of stimulation and repose. Genuine leisure yields at once a feeling of vividness and a sense of peace. It consists of moments so clear and pleasant in themselves that one might wish they were eternal." To understand leisure is to know that it is "an affair of mood and atmosphere rather than simply of the clock." I think that Osler was writing of work and leisure together, of working leisure or leisurely work, which may be important if work is to be creative, and I believe he was describing something not so very uncommon in the nineteenth century. Even work with leisure called for interludes of loafing. From the same century, in some golden summer, Walt Whitman wrote:

> I loafe and invite my soul,
> I lean and loafe at my ease observing
> a spear of summer grass.[3]

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EDITORIALS

Adjuvant Chemotherapy in Breast Cancer Revisited

Editorials in these pages in 1976 debated the merits of "routinely" administering adjuvant chemotherapy following mastectomy.[1, 2] Additional information has accumulated and reassessment of this important and controversial question seems warranted.

Premenopausal women with one to three involved axillary lymph nodes treated postoperatively with L-Phenylalanine Mustard (L-Pam) had an 84% disease-free survival at three years compared to 48% for patients not so treated.[3] Disease-free survival at three years likewise remains significantly better in patients with one to three and four or more involved nodes treated with cyclophosphamide, methotrexate and 5-fluorouracil (CMF).[4] Three year recurrence rate in patients with one to three or four or more involved nodes was 5% and 35% respectively for treated patients compared to 32% and 90% for untreated patients. Longer followup is needed as well as accrual of patients into studies utilizing alternative regimens but evidence now confirms the efficacy of chemotherapy in this group. There is no data to date that bears on the question of chemotherapy in patients with negative nodes.

In postmenopausal women with involved nodes, adjuvant chemotherapy has consistently delayed time to recurrence but neither L-Pam nor CMF treated patients demonstrate significantly increased disease-free survival at two or three years.[3, 4] Multiple studies in progress utilizing regimens other than CMF are showing improved disease free survival but followup times are relatively brief. The case for adjuvant chemotherapy in the post-menopausal group is therefore less convincing than in premenopausal women. With a recurrence rate, however, of 60% (one to three involved nodes) to 80% (four or more nodes),[5] therapy which seems clearly to prolong time to initial recurrence and which may well yet enhance overall survival seems reasonable. Systemic treatment of clinically evident metastatic disease leaves much to be desired. Objective responses are common but mean duration of response and survival are only approximately one and two years, respectively.[6]

Toxicity varies with the regimen used. Nausea and alopecia occur with most. Newer, and effective, programs generally produce less discomfort than does CMF. Serious morbidity or mortality is rare. Long term complications, in particular second malignancies, remain to be seen but must be measured against the disheartening recurrence rate of the original cancer.

One wishes for the information of ten years from now, but in 1978 the evidence is persuasive that all premenopausal women with involved nodes should receive adjuvant chemotherapy. Data in postmenopausal women is sufficiently hopeful to warrant treating the worst prognostic group, i.e., patients with more than three involved nodes. Well-devised regimens other than L-Pam or CMF, as are being used by a number of cooperative groups, would seem sensible here. One feels most indecisive at this juncture concerning postmenopausal patients with fewer than four involved nodes. The need for continuing followup and assessment and for inclusion of all patients whenever possible into carefully constructed studies is obvious.

Robert B. Erichson, M.D.

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New York Medical College

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Screening for Lung Cancer

Lung cancer remains the number one killer in the United States. In 1977 it is estimated that more than 80,000 people will die of this disease in the United States.[1] By 1980, deaths from lung cancer will likely exceed 100,000 per year, a rate approximating that for all accident deaths. Cigarette smoking, on the rise again, is responsible for more than 80 percent of all cases. It is generally accepted that symptomatic lung cancer is advanced cancer, except in those instances when a fortuitous event such as hemoptysis or obstructive pneumonia uncovers a small tumor. The survival figures are grim for all patients diagnosed as having lung cancer. Less than 10 percent will be alive five years later. Hopes for improved survival today hinge upon detecting the disease in its pre-symptomatic stages and detecting patients with a "favorable prognosis" (occult or AJC Stage I non-small cell cancer). There is ample evidence that if detected while still limited in size and extent, lung cancer of the non-small cell variety responds reasonably well to surgical resection, the most effective form of treatment now available. Almost ⅔ of the patients with resectable, but radiographically occult cancer may be expected to survive five years. Among those with non-small cell cancer classified as Stage I, on the criteria of the American Joint Committee (AJC Staging System) post-operatively, the five-year survival rate should approximate one-half.[2]

The chest x-ray and sputum cytology examinations are the only screening tests currently available for detecting pre-symptomatic lung cancer, and they complement each other.[3] The National Cancer Institute has established a cooperative group to evaluate four monthly sputum cytology examinations and periodic chest radiography as a screening test for diagnosis of early lung cancer. The member institutions include the John Hopkins University, the Memorial Sloan Kettering Cancer Center, and the Mayo Foundation. The goal of this cooperative study is to determine whether chest x-rays, three-day "pooled" sputum cytology tests, and lung health questionnaires applied every four months to a group of high risk study subjects (men who are 45 years old or more, smoking one pack of cigarettes or more daily, either upon entering into the study or within the preceeding year) can significantly lower the death rate from lung cancer compared to a similar group tested less frequently. Their results conclude that there is a nine per 1,000 prevalence rate of lung cancer, which is previously unsuspected on first screening, and then there is five per 1,000 man year incidence rate of lung cancer, and the number of survivors in four monthly surveillance groups is 59 percent as compared to 27 percent in annual re-screening groups. Only a few four-monthly surveillance cases were presented in this manner, suggesting that advice regarding annual re-screening was not properly followed.

Although it is hazardous to accept the results of any radiologic and cytologic lung cancer screening study until sufficient experimental and control data have accumulated, have withstood critical analysis, and have been confirmed. However, the Mayo Lung Project has shown some trends that four monthly surveillance cases of lung cancer now greatly outnumber control cases. Nearly 60 percent of the four monthly surveillance cases are AJC Stage I and resectable for cure, whereas only ¼ of the control cases were.

On the basis of the above discussion while we are still waiting for more established data and with good evidence to support the present findings, I could safely recommend the following: 1) The high risk group patients, men 45 years old or older, smoking one pack of cigarettes per day or more, either presently or within the preceeding year, should have sputum cytology, a three-day pooled sample, three times a year or four monthly, along with a chest-x-ray. The screenings among women of similar age and smoking habit, although it is not generally suggested, there has been an alarming rise in the incidence of lung cancer among this group. The screening for lung cancer in non-smokers or young smokers has not been determined, based on statistical evidence. The collection of sputum in any patient will need a special Carbowax solution; 2) In case of positive results of cytology (abnormal Class IV and Class V) the patient should be worked up for an occult malignancy by bronchoscopies and other procedures.

In conclusion, I would like to say that the only hope for better survival for bronchogenic carcinoma is in the early diagnosis of the disease. While the value of the screening test is not fully established, it is now generally accepted that they do facilitate diagnosis of lung cancer in a favorable prognosis group with a higher percentage of curative surgery.

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Mount Sinai Hospital, Hartford, CT

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In Memoriam

DEMING, CLINTON D., Johns Hopkins Medical School, 1910. Dr. Deming was a surgeon in the Hartford area since 1914. He was a veteran of World War I and was a member of the Hartford County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Deming died April 18, 1978, at the age of 93.

DEVENIS, MICHAEL M., Yale Medical School, 1919. Dr. Devenis was a general practitioner in the New Haven area since 1919 until his retirement about 10 years ago. Dr. Devenis was incarcerated in a Russian prison camp in Siberia and was front page news in 1940 when he was liberated from the camp and fled Europe. He was very active in Lithuanian affairs in this country and told several Senate committees of his experiences as a Russian prisoner. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Devenis died in Santa Monica, California, May 28, 1978, at the age of 87.

HINCHEY, RICHARD J., Tufts Medical School, 1921. Dr. Hinchey was an attending physician in obstetrics and gynecology at St. Mary's and Waterbury Hospitals until the time of his illness. He was also consulting physician to UniRoyal, Inc. for 25 years and a medical consultant for the Scovill Mfg. Co. and the Waterbury Co.'s, and also served as examining physician for the Federal Aeronautics Administration. Dr. Hinchey died March 8, 1978, at the age of 79.

LEAR, MAXWELL, Yale Medical School, 1911. From 1924 until retiring in 1971, he was a practicing and consultant surgeon, affiliated with Yale-New Haven Hospital, St. Raphael's Hospital and Griffin Hospital in Derby. He was also an assistant professor at the Yale Medical School. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Lear died in Florida June 30, 1978, at the age of 89.

McFARLAND, FREDERICK W., University of Vermont, 1928. Dr. McFarland was an obstetrician in the Fairfield area since 1928 until his retirement in 1971. He was on the staff of Stamford and St. Joseph's Hospitals and was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. McFarland died March 8, 1978, at the age of 78.

MURCKO, WILLIAM J., Marquette University, 1937. Dr. Murcko was a dermatologist in the Litchfield area since 1937. During World War II he served with the U.S. Army in the Overseas Asiatic Pacific Theater with the Medical Corps. He was a member of the Litchfield County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Murcko died April 26, 1978, at the age of 67.

SMITH, EDWARD R., Yale Medical School, 1940. Dr. Smith was a surgeon in the New Haven area since 1940. He served in the U.S. Navy during World War II. Dr. Smith was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. He died March 5, 1978, at the age of 62.

TIMM, ALEXANDER B., Harvard Medical School, 1940. Dr. Timm was a dermatologist in the New Haven area since 1946. He was a veteran of World War II, serving with the Army Medical Corps, and was a retired lieutenant colonel, and was an associate clinical professor of dermatology at Yale Medical School. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Timm died March 18, 1978, at the age of 64.

TOLK, NATHAN R., N.Y.U. Medical School, 1920. Dr. Tolk was Chief of Surgery at Park City Hospital in Bridgeport until his retirement several years ago. He was a member of the Fairfield County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Tolk died May 16, 1978, at the age of 80.

WEBER, DONALD J., State University of New York, 1956. Dr. Weber was an internist and cardiologist in the Litchfield area since 1969, and was on the staff of St. Mary's Hospital in Waterbury and the Charlotte Hungerford Hospital in Torrington. He was a member of the Litchfield County Medical Association and the Connecticut State Medical Society. Dr. Weber died April 29, 1978, at the age of 46.

ZAGRANISKI, RAYMOND J., Yale Medical School, 1956. Dr. Zagraniski was a ophthalmologist in the New Haven area since 1957. He was assistant professor of ophthalmology at the Yale Medical School and was a veteran of World War II, serving with the Army Medical Corps from 1943-1946. Dr. Zagraniski was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. He died May 17, 1978, at the age of 62.

in Brief

A summary of AMA, medical & health news

American Medical Association / 535 North Dearborn Street / Chicago, Illinois 60610 / Phone (312) 751-6000 / TWX 910-221-0300

The AMA filed suit against the Federal Trade Commission in an effort to overturn the FTC's ruling on advertising of ophthalmologists' and optometrists' services. At issue is whether a federal administrative agency has the legal right to invalidate a law passed by a state legislature. The FTC ruling prohibits states to have laws barring the advertising of eyeglass prices and requires ophthalmologists and optometrists to give patients copies of their eye prescriptions. The AMA suit argues that state legislatures should be permitted to pass laws governing competition and medical practice, as long as they are reasonable and constitutional.

The AMA joined as a co-plaintiff the Florida Medical Assn. lawsuit against HEW. The FMA suit seeks to stop the government from publishing the names of physicians who received Medicare payments last year. The AMA's petition to intervene in the FMA lawsuit was granted by Federal Judge Charles Scott. The Association was also granted an additional temporary restraining order in Chicago against HEW and HEW Secretary Califano on the same issue. Federal Judge Stanley Roskowski said in Chicago that publishing the Medicare payments list would invade the constitutional and statutorily recognized interests of each physician in the confidentiality of personal income information . . . and would deter physicians from treating Medicare patients in the future.

HEW representatives told the National Professional Standards Review Council that a U.S. District Court ruling would be appealed. The court ruled recently that a Washington, D.C., PSRO is an agency of the government subject to disclosure provisions of the Freedom of Information Act. The HEW officials said legislation to exempt PSROs from the act's provisions is being prepared. The Ralph Nader Health Research Group had filed suit in April to obtain the PSRO's records.

A new digest for the medical leadership presenting news and views on national health insurance legislation has been published. The bimonthly newsletter, *National Health Insurance,* is produced by the AMA's Public Affairs Division.

HEW will inaugurate its surgical second-opinion program this summer. The promotional campaign to encourage patients, especially Medicare and Medicaid patients, to obtain a second opinion before deciding on surgery will include 60-second TV spot announcements, four-to-five minute radio "dramas" and five million leaflets to be enclosed with social security checks in selected areas. A national toll-free "hot line" will also be set up. HEW plans to spend $460,000 for the leaflets, $25,000 for the TV and radio promotion, and $130,000 a year for the hot line.

In its attempt to find avenues of "cost containment" for the government HEW has again ignored overall human costs, the AMA said in a letter protesting changes in the Medicare Carriers Manual. The changes, announced by Transmittal 628 from the Health Care Financing Administration, require carriers to consider all laboratory services the same in determining reasonable charges and place a $3 national ceiling on handling charges when specimens are referred to a laboratory. The AMA, calling for withdrawal of Transmittal 628, said HEW's action is misleading to Medicare beneficiaries and is contrary to the spirit and intent of the recently issued Executive Order on rule-making procedures.

Bills to centralize the evaluation of the use and cost effectiveness of medical technology and practice were opposed by the AMA in testimony before the House Commerce Subcommittee on Health. The AMA said the two bills (HR 4869 and HR 10839) "not only could lead to a stifling of research and other creative initiatives that are necessary to improve the quality of medical services available to patients in the future, but also could serve to regiment and limit physician options in providing treatment to patients on an individualized basis."

More than 5,000 medical students and physicians-in-training borrowed more than $7.3 million last year through the American Medical Association Education and Research Foundation. Loans totaled $7,348,000 for an average of $1,422 each. Since the program began in 1962, the AMA-ERF has arranged and guaranteed loans amounting to approximately $85 million.

EXERCISE TESTS BEFORE EXERCISE

Exercise for the sake of cardiovascular fitness has virtually become a national obsession in the USA. Many people who want to start an exercise program first seek the advice of a physician. The American College of Sports Medicine recommends an exercise test before any major increase in physical activity for all persons over 35 years of age, and for those under 35 with risk factors for coronary artery disease, including obesity, family history, cigarette smoking, hyperlipidemia, or hypertension (American College of Sports Medicine, Guidelines for Graded Exercise Testing and Exercise Prescription, Philadelphia:Lea & Febiger, 1975).

Exercise Tests—The main objective of exercise testing (sometimes called stress testing) is to diagnose previously undetected coronary artery disease. The test is a graded, ECG-monitored exercise test, often using either a treatmill or a stationary bicycle, usually with an oscilloscope for continuous monitoring of the ECG before, during, and after the test period. The test is considered positive if the patient develops ECG abnormalities such as marked ST segment depression.

Hazards—Exercise tests themselves rarely have caused myocardial infarctions (P Rochmis and H Blackburn, JAMA, 217:1061, 1971; RA Bruce, in PN Yu and JF Goodwin, eds, Progress in Cardiology, Philadelphia:Lea & Febiger, 1975). The rare deaths or nonfatal myocardial infarctions that occur during exercise tests might, of course, also occur if patients begin an exercise program without taking any test.

A much more common hazard of exercise testing in asymptomatic people arises when the tests give misleading results; healthy people may be led to think they have serious coronary artery disease, or asymptomatic people with serious coronary artery disease may feel free to pursue vigorous exercise programs.

False-Positive and False-Negative Tests—A positive exercise test can have a crippling psychological effect on an asymptomatic person, and published studies suggest that the majority of positive tests may be false-positives. In one study of 138 asymptomatic men with abnormal exercise tests, angiography showed coronary artery narrowing of 50 percent or greater in 25 percent, a minor degree of narrowing in 15 percent, and no evidence of coronary artery narrowing in 60 percent (VF Froelicher et al, Prog Cardiovasc Dis, 18:265, 1976). In another angiographic study of 30 asymptomatic hyperlipidemic men with positive exercise tests, 30 percent showed only minor narrowing and 33 percent had no evidence of coronary artery disease (JS Borer et al, N Engl J Med, 293:367, 1975). False-positive tests can not only cause damaging psychological effects and unwarranted restrictions on physical activity, but can also lead to other diagnostic studies, such as coronary angiography, that are expensive and potentially dangerous.

A negative exercise test, on the other hand, may cause some people to dangerously overestimate their capacity for exercise. Stress tests give false-negative results in many patients with serious coronary artery disease demonstrable by angiography, even when they have angina pectoris (NJ Fortuin and JL Weiss, Circulation, 56:699, 1977). In one study of patients with coronary artery disease documented by angiography, exercise tests were normal in 60 percent of patients with single-vessel disease, 34 percent of those with double-vessel disease, and 24 percent of patients with triple-vessel disease (AG Bartel et al, Circulation, 49:348, 1974).

Conclusion—The results of exercise tests for asymptomatic people undertaking exercise programs are sometimes misleading. False-positive and false-negative results occur commonly, and can lead to serious consequences.

Reprinted from The Medical Letter on Drugs and Therapeutics, *New York, N.Y., Vol. 20, No. 12, June, 1978.*

Brief Summary of Prescribing Information
Combined TEGOPEN® (cloxacillin sodium)
Capsules and Oral Solution
For complete information, consult Official Package Circular. (12) TEGOPEN 9/11/75

Indications: Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

Important Note: When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

Contraindications: A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Warning: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

Precautions: The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

Adverse Reactions: Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

Usual Dosage: Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

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Please see brief summary for prescribing information.

PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiry of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511 (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine* as space permits.

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

Anesthesiologist required. Five man group in Greater Hartford area. Fee for service. Salary negotiable. Send C.V. to CSMS to be forwarded.

Anesthesiologist needed to join group practice in Greenwich. Locum tenens will also be considered. Call Dr. Shaw or Dr. Clark at 869-7000, ext. 360.

Family Physician—bd. cert. or bd. elig. to join three other active Family Physicians in Central Ct. location. Newly equipped office, easy access to full service hospital. Good specialty services. Town of 60,000 with excellent access to recreational and cultural amenities. Incorporated. Excellent fringe benefits.

Family Physician leaving for residency. Office centrally located in Centerville section of Hamden, Ct. Equipment and office furniture available, if desired. Contact M. Levenstein, M.D., 2572 Whitney Ave., Hamden, Ct. 06518. 248-6916 or 239-4392.

Internist or GP to assume General Medicine practice in Wilton, Ct. Fully equipped office; chest unit, EKG, no purchase price necessary. Contact V. Tricarico, M.D., 14 Reservoir Ave., Norwalk, Ct. 06856. 846-2906.

Pediatrician wanted in small town in the greater Hartford area. With access to four large hospitals. Physician wishing to retire after 40 years of practice. Office caters to infants, children and adolescents. An immediate interview is possible. Week days between 12:30 and 5:30 except Thursdays. Call 203-243-0737; after hours 243-0743.

Physicians needed for Social Security Disability Determination. Bd. Cert. or Elig. physicians are needed as agency consultants doing consultative examinations. Exams are scheduled in your office, reimbursement specifics provided upon request. Many specialty fields are needed, especially IM, Orthopedics, Neurology and Psychiatry. Contact Robert P. Coletti, Medical Processing Coordinator, Bureau of Disability Determination, 600 Asylum Avenue, Hartford, CT 06105 or call collect 566-4902.

PHYSICIANS WISHING TO LOCATE IN CONNECTICUT

ANESTHESIOLOGY

Nov. '78. Age 31. AB-cert. Presently in practice. M.D. from Univ. of Santo Thomas, Phil. Int. at Kenmore Mercy Hosp., NY. Res. at Columbia-Presbyterian Med. Ct., NY. and fellowship at Roosevelt Hosp., NY. Grp. or corporation partnership desired. Contact CSMS-Anes. AC.

July '78. Age 32. AB-elig. M.D. from India. Int. in England. Res. at Brookdale Hosp., NY. Will consider all types of practice in any size community in Conn. Arundev D. Desai, M.D., 7 Hegman Ave., Apt. 17-C, Brooklyn, NY 11212.

ANESTHESIOLOGY—CONTINUED

July '78. Age 34. FLEX. AB-elig. M.D. from Witwatersrand Univ. and int. at Baragwanath Hosp., South Africa. Res.'s at Stanford Univ. and Univ. of London. Wishes grp. practice. Contact CSMS-Anes. LS.

Available immediately. Age 53. Conn. license. Nat'l. bds., elig. Presently in practice. M.D. from Downstate. Int. at St. Mary's Hosp., Minneapolis. Res. at VA Hosp., Brooklyn and Sinai Hosp., Detroit. Solo, grp. or assoc. practice in med. or small community in Conn. John J. Cashman, M.D., 68 Woodcrest Ave., White Plains, NY 10604.

Available now. Age 34. AB elig. Presently in practice. M.D. and int. from Osmania, India. Res.'s in England and Mt. Sinai, NY. Suburban area desired. Anes. and respiratory therapy and ER experience, will consider combining all three in small community. Sabiha A. Khan, M.D., 577 So. Country Club Dr., Atlantis, FL 33462.

FAMILY PRACTICE

July '78. Age 41. Conn. license. AB-elig. M.D. from Bombay. Int. at Griffin Hosp., Derby. Res. at St. Raphael's. Presently in practice. Grp. or institutional practice desired. Lakshmi Basu, M.D., 25 Offutt Rd., Bedford, Mass. 01730.

Aug. '78. Age 28. Nat'l bds., elig. M.D. from Philadelphia Coll. of Osteopathic Med. Int. at Metro. Hosp., PA. Res. at Hahneman Med. Coll. & Hosp. Will consider any type of practice in any size community. G.S. Peter Gross, D.O., Parkway House-702, 2201 Penna. Ave., Phila., PA 19130.

Available now. Age 43. MD from Roumania. Wishes institutional type practice in any size community. Marian F. Lupu, M.D., Box 5, Richmond State Hospital, Richmond, Ind. 47374.

July '78. Age 26. Conn. license pending. Reciprocity-Ct. M.D. from the Univ. of Manitoba, int. at McMaster Univ. Hosp., Canada. Grp., assoc. or solo practice desired. Meenaz H. A. Rosool, M.D., #201, 353 Tache Ave., Winnipeg, Manitoba, Canada R2H 3C1.

INTERNAL MEDICINE

Cardiology: Oct. '78. Age 31. Nat'l. bds. cert. MD in W. Germany. Int. at Mt. Sinai Hosp., NY. Res. at Mt. Sinai Hosp., O. Fellowship at Northwestern. Grp. or institutional practice in Ct. Michael M. Neumann, M.D., 5415 N. Sheridan Rd., Chicago, IL 60640.

Summer '78. Age 28. Nat'l. bds., elig. MD, int. and res. at Washington Univ. and Hosp. Will consider all types of practice in large or med. community. Contact CSMS-IM/GAB.

June '78. Age 29. Nat'l. bds., cert. Presently in practice. MD from Univ. of Pittsburgh. Int. and res. at Presbyterian-Univ. Hosp. Wishes grp. practice. Would also consider hospital-based position. Thomas N. Decker, M.D., 128 Sumner Ave.,Pittsburgh, PA 15221.

Aug. '78. Age 28. Nat'l. bds., elig. MD from SUNY at Buffalo. Int. and res. at St. Mary's Hosp., San Francisco, CA. Solo, grp., assoc. or institutional practice in the Norwich-New London area. Lawrence G. Millhofer, M.D., 4048-22nd St., San Francisco, CA 94114.

Gastroenterology: July '78. Age 31. AB-cert. MD from Univ. of Guadalahara. Int. at Dalhousie Univ., Canada and Cooper Med. Ctr., NJ. Res. and fellowship at Med. Coll. of PA. Solo, grp. or assoc. practice desired. Richard J. Eatroff, M.D., 1140-7 Kirkbride Rd., Voorhees, NJ 08043.

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OBSTETRICS AND GYNECOLOGY

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The Diagnosis and Management of Pituitary Tumors

BARR H. FORMAN, M.D., NORMAN J. MARIEB, M.D., KEAT-JIN LEE, M.D.,
FRANKLIN ROBINSON, M.D., AND ISAAC GOODRICH, M.D.

The presence of the pituitary gland—the hypophysis—has been known since antiquity. Galenic theory proposed it was the filter by which slime (pituita)—the by-product of the transformation in the cerebral ventricles of vital spirits into animal products—found its way into the nose and pharynx.

The pituitary is now known to have two major divisions in the human: (a) anterior lobe, the adenohypophysis and (b) posterior lobe, the neurohypophysis. Each has a separate embryological origin. The adenohypophysis arises as an evagination from the ectoderm of the primitive buccal cavity (Rathke's pouch). The neural ectoderm of the infundibular portion of the brain in embryological life becomes the posterior lobe, the neurohypophysis. Cells of the anterior lobe synthesize and secrete (under the influence of a variety of hypothalmic factors) a number of hormones, including prolactin, ACTH, TSH, growth hormone, FSH, LH, and MSH. The posterior pituitary releases antidiuretic hormone (ADH or vasopressin) and oxytocin. These last two hormones are actually formed in certain hypothalamic nuclei from which they are transported to the neurohypophysis for storage and subsequent release.

The "classical" cell types of the anterior pituitary, based on light microscopy, are chromophobes, acidophils and basophils. Chromophobe cells take up only a small amount of acidophilic (eosin) stain. They comprise about 50% of adenohypophysis cell population. Acidophils (alpha cells) absorb a large amount of eosin stain. These cells comprise about 40% of anterior pituitary cells. Basophils (beta cells) have an affinity for hematoxylin. They make up about 10% of the total cells in the anterior pituitary.

The pituitary gland weighs about 500 mg. in the adult. It rests in the "Turkish saddle" at the base of the skull—the sella turcica. The upper limit of the normal volume of the sella turcica is about 1100 cu. mm.[1] Macroadenomas of the pituitary may cause enlargement of the sella turcica beyond this limit. Microadenomas (10 mm. or less in diameter) may cause focal enlargement or "ballooning" of the floor of the sella, often anteriorly and unilaterally.[2] The diaphragma sella forms the superior border of the sella turcica. It is the dural "roof" over the pituitary through which the infundibular stalk passes from the hypothalamus.

Diagnosis of PituitaryTumors

Physicians in all specialties should be aware of the different ways patients with pituitary tumors present so that prompt work-up and therapy can be undertaken.

These tumors can present in several well defined patterns:

1) Neurologic symptoms due to mass effect or pressure: headache, visual disturbances or field cuts, or uncinate fits.
2) Endocrine deficiency syndromes: short stature, amenorrhea, impotence, polyuria (diabetes insipidus), hypothyroidism or adrenal insufficiency.
3) Hormone excess states: Acromegaly, galactorrhea, Cushing's Disease, precocious puberty or rarely hyperthyroidism.
4) Asymptomatic: enlarged sella turcica seen on routine skull films as after head trauma or as part of a sinus series.

BARR H. FORMAN, M.D., attending physician, Department of Medicine and Co-director of the Metabolism section; NORMAN J. MARIEB, M.D., attending physician, Department of Medicine and Co-director of the Metabolism Section; KEAT-JIN LEE, M.D., attending Otolaryngologist, Department of Surgery; FRANKLIN ROBINSON, M.D., Chief of the Neurosurgery section; ISAAC GOODRICH, M.D., attending Neurosurgeon; all of the Hospital of Saint Raphael.

Presented in part in a symposium held at the Hospital of Saint Raphael, Sept. 18, 1976.

In general terms, about one third of the truly asymptomatic patients with an enlarged sella do not have pituitary tumors, but rather an "empty sella." This syndrome is due to the presence of arachnoid fluid below the dorsum sellae, usually forming a cyst-like structure and enlarging the bony sella due to pressure from the arachnoid pulsations. A very rare patient with an empty sella may have acromegaly, galactorrhea or loss of vision. However, the majority of patients with an empty sella will be hormonally intact and require no therapy.

On the other hand most patients with pressure symptoms or signs of hormone excess or deficiency will have actual pituitary tumors. While the vast majority of these tumors are benign, it is nevertheless important to treat these patients so as to return endocrine function to normal as well as to prevent loss of vision, pituitary infarction or even erosion into the sinuses which can lead to meningitis.

Table 1 lists the various pituitary hormones and their hypothalamic, physiologic and pharmacologic control.[3] [4] The availability of accurate radioimmunoassays for most of the pituitary hormones makes the work-up of pituitary disorders very exact. A brief explanation of the interactions of the pituitary, hypothalamus and the various endocrine end-organs helps us to understand the work-up protocol.

The pituitary has two basic mechanisms of control: "negative feedback" and "dual control." Negative feed-back control regulates thyroid, adrenal and gonadal function much like a thermostat controls a furnace (Figure 1). A fall in thyroxine (or possibly tri-

Table 1

Hormone (Structure)	*Biologic Action*	*Hypothalamic Control*	*Stimulators*	*Inhibitors*	*Tests-Site of Action*	*Normal Response*
Growth Hormone (Peptide)	Promote growth of bone, cartilage & muscle. Elevate blood glucose	Dual Control: +GHRH/ -Sommatostatin	Sleep Hypoglycemia Exercise Stress Amino Acids Estrogens L DOPA GHRH	Hyperglycemia Sommatostatin Phenothiazines Free Fatty Acids	Insulin Hypoglycemia-hypothalamus Arginine infusion-hypothalamus L DOPA-hypothalamus Glucose tolerance test-hypothalamus	↑ ↑ ↑ ↓
Gonadotropins (Glycoproteins)	Female: Promote corpus luteum & ovarian steroids	Negative feedback: LHRH	Low estrogen Low testosterone Clomiphene	High estrogen High testosterone	LHRH-pituitary Clomiphene-hypothalamus	↑ ↑
Luteotrophic Hormone	Male: Stimulate Testosterone					
Follicle Stimulating Hormone	Female: Maturation of ovarian follicle Male: Promote spermatogenesis					
Prolactin (Peptide)	Promote lactation	Dual Control: -Prolactin Inhibiting factor/ +TRH	Deep sleep Breast manipulation Reserpine Phenothiazines Pregnancy TRH	Ergot alkaloids L DOPA	Chlorpromazine-hypothalamus TRH-pituitary L DOPA-hypothalamus	↑ ↑ ↓
Thyrotropin (Glycoprotein)	Increases thyroid growth Stimulates thyroid hormone synthesis	Negative feedback: TRH	Hypothyroidism TRH	Hyperthyroidism	TRH-pituitary	↑
Adrenocorticotrophic Hormone (Peptide)	Promotes adrenal growth and steroid synthesis	Negative feedback: CRF	Stress Hypoglycemia Vasopressin Metyrapone Hypocortisolism	Hypercortisolism	Dexamethasone-hypothalamus Metyrapone-adrenal/hypothalamus	↓ ↑
Vasopressin (Peptide)	Promote water reabsorption by the kidney	—	Dehydration Hyperosmolarity Hypovolemia Morphine Cholinergic drugs	Volume expansion Alcohol Stress	Volume loading Volume depletion	↓ ↑

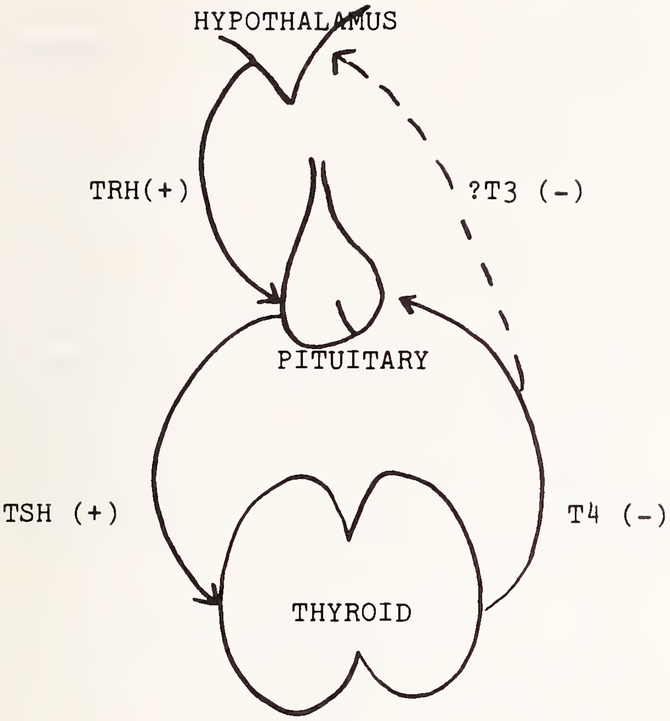

Figure 1
Representation of thyroid control. The hypothalamus releases the tri-peptide hormone, TRH (thyrotropin releasing hormone), which stimulates the pituitary to release TSH (thyroid stimulating hormone) which in turn stimulates the thyroid to synthesize and release thyroid hormones into the blood stream. Once normal levels of circulating T4 (Thyroxine) or possibly T3 (Triiodothyronine) are achieved, further release of TSH or TRH is inhibited. Primary thyroid failure results therefore in abnormally high TSH levels whereas hypothyroidism due to pituitary deficiency is characterized by inappropriately low levels of TSH. This scheme is representative of "Negative Feed-Back Control."

iodothyronine), cortisol or sex steroids is sensed by the hypothalamus which releases small peptides that stimulate the pituitary gland to release thyrotropin (T.S.H.), corticotropin (A.C.T.H.) or luteotrophic hormone (L.H.). These hormones in turn stimulate the release of thyroxine, cortisol or sex steroids. Once normal hormone levels are achieved, further hypothalamic and pituitary hormone release is inhibited. Frequent blood sampling in normal subjects indicates that there are many bursts of pituitary hormone release throughout the day and night.

Dual control is much like a "push-pull" system. Circulating growth hormone and prolactin levels are the result of the balance between inhibitory and stimulatory hypothalamic hormone levels. Dopamine, serotonin, histamine and catecholamines released from nerve endings act as neurotransmitters and determine the level of these pituitary hormones and possible melanocyte stimulating hormone (M.S.H.) as well.

The hormones of the posterior lobe of the pituitary, vasopressin and oxytocin are controlled differently. These two hormones are actually made in the hypothalamus and only stored in the pituitary where their release is mediated by non-hormonal mechanisms.

Physiologic and pharmacologic testing of the pituitary are based on the above control systems. As with all endocrinologic testing the diagnosis of a deficient hormone is made after adequate stimulation fails to increase the hormone, while high levels are confirmed by the failure to suppress the hormone.

Pituitary hormone deficiency states are usually easily recognized, but panhypopituitarism can remain undiagnosed until late adulthood when intercurrent disease brings the patient to medical attention. The clinical presentation depends on the specific hormone deficiency.

Diabetes insipidus is recognized by the great thirst and frequent urination that occurs. A helpful distinguishing feature is that these patients frequently awaken at night to urinate and drink whereas patients with psychogenic water drinking are able to sleep through the night. However, patients with frequent urination and excretion of dilute urine can be very difficult to pinpoint a definite diagnosis. Longstanding diabetes insipidus can result in bladder enlargement so that with the increased bladder capacity, polyuria decreases although total urine volume excreted remains elevated.

Amenorrhea, either primary, or secondary, is probably the most common presenting symptom of pituitary tumors in females. Loss of libido or even impotence is the counterpart in males.

Fatigue, weight loss, electrolyte abnormalities, hypotension or hypoglycemia are the usual symptoms of patients with ACTH deficiency. These patients do not show the classic Addisonian pigmentation of primary adrenal insufficiency because of the low ACTH levels and helps distinguish pituitary from adrenal insufficiency.

Short stature or sudden insulin sensitivity in a diabetic may be clues to growth hormone deficiency. As most adults have few symptoms of growth hormone deficiency, it is usually short children that get initially screened. However, loss of growth hormone reserve on testing is a very common finding in adult patients with pituitary tumors.

Hypothyroid symptoms are well known and include weight gain, dry skin, hoarse voice, lethargy and bradycardia. It is very important to distinguish TSH deficiency from primary thyroid failure before thyroid hormone replacement is begun. This is because the patient with TSH deficiency may also have ACTH deficiency so that treatment with thyroid hormone alone and not cortisol may result in Addisonian crisis.

Prolactin, MSH or oxytocin deficiencies have very little clinical importance. Any combination of hormone deficiencies may coexist so that once one pituitary hormone deficiency is documented others must be carefully evaluated.

Pituitary excess states are characterized by the symptoms of hypersecretion of a single pituitary hormone. However, with growth of these tumors, other pituitary hormones may become deficient.

With the recent development of prolactin assays, hyperprolactinemia is becoming the most common finding of hyperpituitarism. But not all patients with elevated prolactin levels have tumors or will have galactorrhea. The finding of galactorrhea, amenorrhea and elevated prolactin levels is very suggestive of a microadenoma secreting prolactin.

Growth hormone excess is characterized by gigantism in children and acromegaly in adults. The acral changes may be very gradual and not until the patient is seen by a new physician or by a "long-lost" relative will the facial, hand, tongue and foot changes be noted. Excessive sweating, headaches, joint pains, heart failure, diabetes and occasionally galactorrhea are common complaints.

Cushing's disease, with "moon-facies," buffalo hump, truncal obesity, hypertension, bruisability and especially pigmentation is most often due to pituitary ACTH excess which results in bilateral adrenal hyperplasia. Occasionally, the late appearance of pigmentation and signs of a pituitary tumor develops in patients after bilateral adrenalectomy—so called "Nelson's Syndrome."

Very rarely will hyperthyroidism be caused by a TSH secreting pituitary tumor so that routine screening of all hyperthyroid patients for TSH excess is unrewarding. However, pituitary enlargement and even tumors can develop in patients with longstanding untreated hypothyroidism.

Longstanding hypogonadism can rarely result in a gonadotrophin secreting tumor. Precocious puberty is usually due to hypothalamic tumors rather than primary pituitary tumors.

Radiation Therapy and Surgery of the Pituitary

The first reported cases of pituitary adenomas treated by x-ray were in 1909.[5] [6] There soon followed a proliferation of papers with even larger numbers of cases with a definite tendency to indicate that radiation therapy had an important role to play in treatment of pituitary tumors. In 1939, Henderson's review of Cushing's pituitary tumor series revealed a decrease in the recurrence rate by a factor of over four if postoperative radiation therapy was given.[7] In view of the relatively high mortality rate by either trans-sphenoidal or transfrontal approaches in this pre-antibiotic, pre-steroid era, the natural extension of this concept was to give radiation therapy as the primary form of treatment of all patients suspected of having a pituitary adenoma. Radiation therapy was a noninvasive form of therapy with a relatively low morbidity and mortality rate. Howver, it gradually became apparent that with a lack of histological diagnosis, some patients with aneurysm (such as the cavernous portion of the internal carotid artery), empty sella syndrome, craniopharyngioma, meningioma, etc., were receiving radiation therapy.

Today, radiation therapy is reserved as a primary mode of treatment in patients refusing surgery or certain poor risk patients. Postoperatively, it is given in cases of macroadenomas (10 mm. or greater in diameter), when total removal was not accomplished, and in cases of nonfunctioning (non-hormone releasing) microadenomas in which there was doubt of a total extirpation at the time of surgery. It also may be given in cases of hormone releasing microadenomas in which persistent elevated hormone levels are present postoperatively.

The usual form of current radiation therapy is by external radiation through a megavoltage source, delivering 4,000 to 5,000 rads over a period of 4 to 6 weeks. Stereotactic interstitial radiation (such as radioactive Yttrium) has largely been abandoned because of the relatively high risk of hypopituitarism, CSF rhinorrhea and local infection. Another technique, proton beam therapy, allows for greater depth dose deliverable to the pituitary with less scattering and more accurate delineation of radiation. The results reported have been better than conventional radiation.[8] However, this technique requires very expensive equipment, cyclotron-generated heavy charged particles, and is currently available at only two major centers in the United States (Mass. Institute of Technology and University of Berkley). Heavy particle irradiation is not appropriate in cases of suprasellar extension or in cases which have previously received radiotherapy.

With the development of antibiotics and steroids, operative mortality and morbidity for pituitary tumors has been dramatically reduced. Championed earlier by Cushing—but given up by him because of infection—the trans-sphenoidal approach to the pituitary has had a resurgence over the past ten years, utilizing the advanced technology of microsurgery. Indications for surgery now include, increased intracranial pressure, visual deterioration, endocrinopathy and endocrine responsive metastatic neoplasms, (breast and prostate). Cases of hypersecreting macroadenomas or microadenomas including agromegaly, Cushing's syndrome, Nelson's syndrome, and hyperprolactinemia (amenorrhea-galactorrhea syndrome), are now being operated upon routinely, often with total tumor removal and preservation of normal pituitary gland function. If the diaphragma sella is large enough, even tumors with significant suprasellar extension (which have not extended into the anterior or middle fossa) may be approached trans-sphenoidally with intra-operative fluoroscopic monitoring.

Intracranial procedures include the frontal, fronto-temporal and temporal approaches, depending on the predominant direction of tumor growth intracranially. In general, craniotomy is employed only in advanced cases today.

The two most commonly employed open approaches are the trans-septal, trans-sphenoidal (especially suited for tumors) and the trans-ethmoidal (usually used for total hypophysectomy in patients with metastatic breast carcinoma) techniques.[9] The mortality rate is between 1% and 2% in large series.[10] Complications are infrequent. The most common is transient diabetes insipidus. Others include meningitis (1%) and CSF rhinorrhea (2%). If postoperative radiotherapy is not required, hospital discharge is usually within 7 to 10 days after surgery. Stereotactic trans-sphenoidal approaches include radioactive Yttrium, cryosurgical, and radiofrequency techniques. Reasonable results were obtained with these techniques, but the complication rate (including oculomotor palsies, meningitis, CSF rhinorrhea, etc.) was relatively high.

The preoperative evaluation of pituitary tumors epitomizes the team concept of medical care, requiring an endocrinologist, ophthalmologist, neurosurgeon, otolaryngologist, and infectious disease specialist.

As physicians in all subspecialities will see patients with many of the symptoms mentioned above, it is necessary to keep in mind the diagnosis of pituitary tumors during evaluation so that prompt diagnostic studies and therapy can be instituted as outlined above.

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Sexual Therapy of Diabetic Impotence

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The problem of impotence in the diabetic male has been known by clinicians since the turn of the century.[1] Some studies indicate impotence to be found in 50% of patients[2] which is much higher than in the U.S. population as reported by Kinsey.[3] Faerman studied 250 diabetics between 1967 and 1970 in whom complaints of impotence ranged around 40%.[4] Their ages ranged from 18 to 40.

The diabetic male who has some sophistication is aware that organic impotence is a real possibility in his lifetime. More patients are beginning to discuss this problem with diabetologists frankly. The function of the sex therapist is to assist the internist in determining whether there is organic or psychogenic impotence, and if psychogenic, to treat the patient with the new techniques in sexual therapy. This paper concerns the treatment of two cases whose complaint of impotence was over two years' duration.

The diabetic male has potential for neuropathies involving S2, 3 and 4. Erection occurs on stimulation of components of the parasympathetic nerves (nervi erigentes). Increased blood flow and tumescence of the cavernosum and spongiosum are begun. As the cavernous spaces fill, pressure is exerted on the venous system which has funnel-like valves (polsters), preventing return of venous blood and thus maintaining distention of the cavernous tissue. The same mechanism applies to the clitoris.[5]

A carefully obtained history is necessary to sort out the cause of impotence. Many patients will state that they have been without erection for some time. The layman's interpretation of impotence is usually

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described as his inability to "get hard." History-taking may reveal the extent of tumescence. If there is evidence of any tumescence, there is a fairly good chance the patient may be helped. Renshaw[6] describes the danger of making a diagnosis of impotence without a full evaluation by a sex therapist.

Ellenberg[7] described a case where a patient denied any kind of tumescence, but by placing a penile cuff on the patient, evidence was shown that during sleep there was some engorgement. These patients, too, are good candidates for sexual therapy.

Case No. 1

R. is a 48-year-old stockbroker who appeared at the insistence of his wife. She complained about R's impotence, her accepting it, and that he was making no attempt to gratify her needs. She had no difficulty in accepting orgasm by methods other than intercourse.

When first seen, R, a diabetic of 12 years, was under control. Examination revealed no peripheral or bladder neuropathy. He stated that about three years ago he noticed a gradual development of difficulty with erection. This produced more anxiety as he tried to force himself to become erect. To avoid anxiety he deliberately provoked arguments with his wife to avoid contact with her. He had been unable in two years to have an erection sufficient to penetrate, but had slight tumescence upon arising in the morning.

Encouragement and education of the couple were begun, and the Masters-Johnson technique of sensate focus (massage)[8] was suggested. They were told not to attempt coitus under any circumstances, even if R were to have a full erection. They were seen twice a week. The third week of sensate focus, R and his wife appeared with sheepish grins. They were anxious and concerned because the admonishment not to have coitus had been violated. During the week, R was capable of full erection and although his wife put no pressure on R to perform and preferred to wait, R insisted and convinced his wife. Coitus was successful. Follow-up visits showed they were continuing sensate focus which produced full erection in R, followed by successful intercourse.

Recently R called and requested an appointment, alone, without his wife's knowledge. Overcoming his initial difficulty in speaking, he finally related that he never felt attracted to his wife. Embarrassed, he described how his wife's father had bribed R into marriage with money and a position of responsibility and high earnings. Some time after the diagnosis of diabetes was made, he read a news magazine article detailing the possibility of impotence in diabetes. The next visit to his diabetologist he inquired about this. He was beginning to lose erection during intercourse. Fortunately his physician avoided causing an iatrogenic impotence by giving the patient a medical imprimatur of the article. However, R showed the article to his wife, and after his last coital act, which failed, he resigned himself to an asexual life for himself and his wife.

What has astonished him since entering sexual therapy was the aggressiveness of his wife. It "turned him on" to have his wife massage his body and search for methods to please him, give him pleasure, and yet make no demands on him during periods of sensate focus. They continue to function well.

Case No. 2

S. is a fifty-year-old corporate comptroller who was referred for sexual therapy after a year of impotence.

He stated that he had no morning erection, was unable to masturbate or respond to any manipulation by his wife, manually or fellatio. The patient was a juvenile diabetic since the age of nine. He exhibited mild peripheral neuropathy in his left leg and thigh. The patient stated that he didn't mind satisfying his wife manually or orally.

He had been given a series of testosterone injections without beneficial results. Ellenberg[7] states that hormones are of no help in these cases. S seemed anxious for the therapist to corroborate his impotence as organic and thus remove the pressure his wife was placing on him. He would make statements like "Why bother? It won't work," or "the screwing you get isn't worth the screwing you get."

During the interview with his wife, she related an entirely different story. She revealed that S developed tumescence but not a full erection. Even so, it was sufficient to penetrate her; the last time was two weeks ago! This, the patient did not reveal. It was then decided to begin the searching of motives for denying his abilities.

He was the second child of an extremely religious family. Masturbation began at fifteen, but infrequently because of the association of sin to the act. It wasn't until he was 26 years of age that he had intercourse for the first time, with a prostitute. He suffered premature ejaculation. At 28 he fell in love with a girl, but his friends told him the girl was "loose." The pressures of his early religious training convinced him that this was not the girl to bring home to mother. Instead, he settled for another girl, a virgin, who did not excite him as much as the first girl.

About four years before therapy he developed problems in the company for which he worked. It became apparent that S had been depressed and that this had deepened over the years. He would sit in his office, rarely working, gazing out the window. He denied that he repressed much of his own disappointment in his work career, or having any sexual fantasies. He was started on anti-depressive medication. In three weeks his work habits began to change. He showed more interest and enthusiasm.

One day his wife suggested they see a pornographic film—the first experience for both. He noticed an increased tumescence. That evening, while pleasing his wife, he developed a full erection. Attempts at coitus were made but he could not ejaculate. He admitted to having fantasies of the girls in the film which aroused him to erection, but felt guilt at his thought, and also that it was not fair to his wife to be thinking of someone else during intercourse. However, as he accepted his fantasies during intercourse, he still ejaculated prematurely. It was at this point that the wife returned for treatment and both were instructed in sensate focus. The squeeze method was employed; after the fifth week he was successful in controlling ejaculation.

The above cases illustrate that evidence of any tumescence in diabetic patients is strong evidence of amenability to treatment and should also rule out other manifestations that could interfere with performance. Anxiety, depression, alcoholism, and castration fears are causes for vulnerability in the sexual act as well as the usual known causes associated with diabetic impotence.

Thus for a physician, "a diagnosis of organic impotence in a diabetic may be not only extraordinarily difficult, but also professionally premature."[6]

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A Primer On Holistic Medical Practice

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ABSTRACT—The purpose of this paper is to emphasize anew the inseparability of psyche and soma in both health and disease. To call some conditions psychosomatic and others not is to make an artificial and fallacious distinction. While more frequent recognition is now given this point of view, it does not always find expression in actual practice. Some of the effects of this on therapeutic approach are discussed.

I would like to discuss the effects of disease on people; and how people in turn affect the course of their diseases. I want particularly to underscore the importance of an attitude of concern, sensitivity, awareness, and empathy.

Essentially what I am concerned with is the various ways in which personality factors, physicians as well as their patients, play a part in determining the quality of care they receive. Hospital practice is likely to be relatively impersonal. A physician will tend to see his patient in terms of the immediate problem he presents. Physicians will be seeing him in an isolated segment of his life and in relation to a circumscribed life event—his present illness. Since in all instances the patient's past personal and medical history does have a bearing on his current situation, this attitude often results in an incomplete understanding of the patient and his current illness. What is missing is a sense of continuity of patient care which is essential to the practice of good and comprehensive medicine.

Introduction to the hospital involves meeting with strangers in a strange environment. Little wonder that most people in that situation are apprehensive. The hospital's need for vital statistical data confronts the patient in the Admitting Office. At that time, his interest, attention, and concern are focused on what for him are far more immediate and pressing matters than his birth date and country of citizenship. When he gets to his bed in the hospital, the attempt begins to assemble the data which will be needed to formulate a diagnosis and a treatment plan. Unless these efforts include empathic inquiry into the nature and circumstances of the individual's home life, marital and intra- and extra-familial relationships, work situations, aspirations, and expectations, it will result in a mere sketch of a limited aspect of a human being. We have to be ever mindful of the fact that so much of our training has been disease-oriented rather than patient-oriented. It has tended to program us in such a way as to adumbrate our concern and awareness of the individuality of the patient under our care. Medical school has supplied us with a scientific foundation on which we have to go on and build. The practice of medicine is art as well as science. There is no contradiction between the two. Both are essential to comprehensive medical care. What we do with our science, how we use it, is a measure of our art and determines our quality as physicians. Toward disease as such, an impersonal attitude may be appropriate; in the treatment of our patients, we must be completely personal. While it is important to be objective in evaluating symptoms and signs, this does not preclude the need to be empathic. To recognize and appreciate what it is that the patient is experiencing is essential for proper diagnosis. It is equally important that we convey to the patient that we have this interest and this concern. His awareness of our interest in him as an individual will foster confidence in his physician. He will feel freer to communicate his concerns and this will enable us to get to know what we need to know to help him. Oftentimes this kind of added information will prove to be particularly significant. When a physician asks a social worker to obtain for him a psychosocial history from his patient, he misses a fine opportunity to establish more firmly the kind of personal relation-

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ship with his patient which would enable him to treat his "whole" patient more effectively. The very fact of such history-taking on the part of the doctor is itself important evidence to the patient of the physician's interest in him as an individual human being.

It is true that the circumstances of hospitalization are not the best for the establishment of the intimate personal relationship that can and often does exist in private office practice. There is, however, one aspect of the hospital situation which can serve to expedite a close relationship between the patient and his physician. The need of the patient who is hospitalized is such that his tendency will be to reach out for help more than he ordinarily would. It is urgent that the physician be aware of the patient's concerns and that he make the necessary effort to gain the patient's confidence. As we noted at the outset, the patient tends to lose his sense of personal identity in the hospital. He becomes a case of peptic ulcer rather than a particular individual with a stomach ailment. The result is that the ulcer may be treated while the suffering patient lies awake worrying about his family, his job, his security. His anxiety inevitably aggravates and prolongs his illness. An empathic attitude on the doctor's part, and an opportunity to ventilate his concern, will go a long way toward helping this patient.

We have to be especially careful in treatment of those individuals, who, in spite of their complaints, do not show objective signs of illness or positive laboratory findings. It is a serious mistake to tell those people "there is nothing the matter with you." First, we cannot be certain that we have not overlooked something of an "organic" nature, and second, even if this is not the case, there is in fact something the matter with these patients. Their discomfort and their complaints, with or without objectively determined basis, do themselves constitute "something wrong." This is as much an area worthy of investigation as the stomach itself. The tools for this purpose are different but skill in their use can and must be learned. We need also to keep in mind that the presence of functional symptoms does not at all exclude a coexisting organic illness. As a matter of fact, long-standing disturbances of function do result in structural change. Treatment must be directed at both cause and result. The differential diagnosis between organic disease and functional disturbance is frequently difficult and sometimes impossible. There is no denying that there are potential difficulties in the practice of comprehensive medicine. These impediments and interferences, however, reside in the doctors as well as the patients. Identification of certain personality characteristics which act as road blocks to necessary information-gathering and objectivity is a first and necessary step. While this will not automatically lead to major changes in the temperament or character of either the patient or ourselves, it can facilitate some degree of modification and to that extent will result in better patient care.

Let us start with consideration of some of the more common patient attitudes and behaviors which pose problems for their nurses and physicians. In substantial measure these will be the unique and idiosyncratic expressions of the particular patient's way of dealing with his anxiety. Recognition that a belligerent outburst on the part of a patient with a myocardial infarction is a manifestation of denied anxiety and an attempt at self-reassurance will make it easier for the professional staff to care for such a patient. They will see the patient's behavior as self-defensive, and they will be more likely to deal objectively with it, without personalizing and responding defensively themselves. Similarly, they will properly recognize as an anxious plea for help the frequent summoning of a nurse for trivial complaints; and will be better able to give such a patient the reassurance he seeks and needs rather than reacting as if being personally abused. Or, they will recognize the patient who not so subtly exhibits himself as motivated by a need to assert his manhood and thus alleviate his anxiety. These are just some examples of the kind of thing we have in mind.

It may be that what you have previously heard on this subject has dealt almost exclusively with the personality of the patient and little if at all with the role of the physician's personality.

There are many ways in which physicians' attitudes, likes and dislikes, personal and familial experiences affect the manner in which they treat their patients. For some patients, the unconscious biases of their physicians promote the best of care; others are less fortunate.

We tend to make the tacit assumption that the doctor is a constant. This is certainly not the case. The fact is that the varying personalities of different physicians each constitute an integral part of the particular doctor's therapeutic armamentarium. It can be enormously helpful to be aware of the effect that one's manner, words and actions have on patients. We have to be especially careful not to impose our own value systems. Ours may suit us fine; but they might be all wrong for our patient. For example: we may pride ourselves on our stoicism. Our patient in pain may have no such self-image. He may be quite comfortable with announcement and even exploitation of pain and acceptance of medication for relief. We have to keep ever in mind that we are treating him and not ourselves. Dr. A, who can't stand pain, prescribes Demerol for his patient in pain. Dr. B, who sees himself as tough and able to tolerate pain, is more likely to expect his patient to make due with aspirin. In the same vein, we must also be careful not to confuse our attitude toward a particular patient with an attitude derived from another source. For example: if Mr. A has the misfortune to remind us, with or without our awareness, of a much disliked relative, we may treat him as if he were indeed that person.

The doctor/patient relationship is basic to all treatment. The more one can learn about oneself, the better able he will be to use himself as a treatment tool. Sick people can benefit maximally when medical, pharmaceutical, and surgical procedures are all utilized within the context of a consciously employed understanding of the doctor/patient relationship. Scientific knowledge and psychosocial skills together form the foundation of good clinical medicine.

In order to implement our understanding, we have to learn how to communicate effectively. The art of talking with a patient is not taught at medical school; yet it is a fundamental requirement for good medical practice. The objective is to make the patient feel comfortable, to foster his trust in the doctor's skill and judgment, and to make clear the doctor's respect for the patient's confidence and personal motivations. We must try to act in such a way as to make it easier for the patient to talk freely and frankly. All of this takes time and patience and must be based on a sincere desire to help. But time, patience, and desire to help are not enough. Certain learnable skills are needed. We should try to use open-ended questions, and questions which can't be answered by a platitude or a shrug. We must try to avoid putting the patient on guard as we do when we announce that we wish to explore his emotional life. It is best that we take some cues already supplied by the patient and use these as springboards for our further inquiry. We may ask about his aspirations; and how he sees himself vis-a-vis these earlier goals. He may then expose heretofore hidden resentments, feelings that he has been caught on a treadmill, that his wife's demands have kept his nose to the grindstone, etc. We may be indirectly alerted to these situations by noting the patient's changing of the subject at a particular point in our conversation, by his blocking, beginning to overtalk his part, becoming morose, or even by becoming inappropriately chipper and falsely cheerful.

To put the matter in more concrete terms, let us use the paradigm of the patient who has just suffered an acute cardiac lesion with dyspnea, orthopnea, anginal pain—and the oft accompanying severe anxiety. He is now confronted with largely inseparable physiological and psychological stresses. The anxiety will tax his cardiac as well as his psychological reserves. The effect will be an unfavorable influence on the medical course, the response to therapy, and the total personality function. Anxiety and emotional tensions will both increase the heart's work and reduce its efficiency. First, there are the direct effects of disturbed physiologic function. Congestive heart failure may be accompanied by disturbance in cerebral circulation with resultant cerebral anoxia and delirium which may lead to over-exertion and refusal to accept medication. Chronic cerebral anoxia may accelerate vascular degenerative brain disease and thus contribute to the development of a degenerative, organic dementia. Second, there are specifically psychological consequences. The patient's ability to make a realistic appraisal of his psychophysiological status, to adjust to the necessary limitations imposed by his condition, and to appropriately modify his lifestyle will all depend on his personality structure and how he interprets his cardiac condition. The attitudes of hospital personnel and the manner and words of his physician will greatly affect his interpretation and his response.

The patient's assessment and appraisal of the severity of his cardiac condition will play a major role in determining its effect. The better we can understand the particular impact of the experience in terms of this specific individual's self-image, the better we will be able to help him. He may incorporate the cardiac insult into a pre-existent neurotic pattern; he may be overwhelmed by it; it may come at a time when he is already overburdened with marital, social, or work problems. He may have an added concern because of the invalidism or deaths of close relatives from heart disease. He may give up, become depressed, feel guilty for not being able to care for his family. Conversely, he may play up his invalidism in order to prolong a dependency position or to avoid an emotionally threatening situation. The possibilities are many. A good personal history will often lead to disclosure of the patient's dynamics. To get a good history requires a good doctor-patient relationship and the tone for this can be set in the initial meeting with the patient. A calm, empathic, ready-to-listen, personal attitude will be of great help with most patients. Since most of these patients are overtly or covertly anxious and feel deeply threatened, they are quite ready for a dependent relationship with the doctor whom they see as their major hope. In talking with the doctor, and because of his calm, uncritical acceptance of what they are saying, they often feel relieved and unburdened. After the patient's confidence is gained, and not on the first meeting, the physician can begin to talk with him about the irrationality of some of the expressed and implied fears and to discuss with him the realistic aspects of his situation, what he can look forward to doing and what he may want to modify in his way of life. Realistic reassurance is always a help, even for those who deny anxiety; but the physician should not overdo it. If you do, the patient will suspect your honesty and your sincerity; it will ring hollow; he may even conclude that he must indeed be terribly sick to warrant all that reassurance. The patient's family should always have a role in planning for the patient, during and after his illness. They should be interviewed and seen as potential aides in the therapeutic regimen. It will often be necessary to help them to deal with their anxieties and to instruct them in their interrelationship with the patient.

Tensions may arise in the doctor-patient relationship on the basis of transference and countertransference distortions. The patient's anxiety may thereby be intensified and this may lead to exaggeration of his preexistent neurotic defenses. He will then be more difficult to treat. The doctor, too, may react to certain patients or at certain times with irritability, annoyance, hostility, exaggerated concern—all of which deprive him of a capacity for objectivity, empathy and understanding. The more a physician can maintain an awareness of his feelings about his patients the less frequently he is apt to say and do things which interfere with his capacity for healing them. It is noteworthy that mention is rarely made in medical or surgical reports about the role of the physician's attitude although it is known that what he feels about his patients affects his medical or surgical procedures. It is as though the personal influence of the doctor had nothing to do with the patient's recovery or his inability to get well, or as though such data were unscientific and therefore not to be recorded. In contrast to this, the reactions of the patient are often included in scientific reports. The patient's refusal of surgery, his tenseness, restlessness or failure to respond to medication are described and reported as though they were always unrelated to the doctor's attitude toward him. In the same way that we should no longer ask whether a specific illness is organic or functional but rather how much of it is the one and how much the other, so in our treatment failures we need to know to what extent were we, as well as the patient, responsible.

Dr. Francis Peabody, a Harvard Professor of Medicine, wrote 50 years ago: "The clinical picture is not just a photograph of a man sick in bed: it is an impressionistic painting of the patient surrounded by his home, his work, his relations, his friends, his joys, sorrows, hopes and fears. The secret of the care of the patient is in caring for the patient."

Latex Agglutination Test Diagnoses Bacterial Meningitis

Five new methods for rapid, accurate diagnosis of bacterial meningitis—including a latex agglutination test of cerebrospinal fluid that takes three minutes to administer and does not require sophisticated laboratory equipment—have been reported by Dr. Sydney Ross of the Research Foundation of the Children's Hospital National Medical Center, Washington, D.C.

The tests use either latex agglutination, lactic dehydrogenase, limulus lysate, lactic acid gas chromatography, or counterimmuno-electrophoresis.

The first three methods can be performed at the patient's bedside. None of the methods takes more than an hour.

The latex agglutination test "has the virtue of simplicity and rapidity," said Dr. Ross, "and can be adapted at hospitals without sophisticated labs."

Dr. Ross, a grantee of the National Institute of Neurological and Communicative Disorders and Stroke, described the methods at a recent pediatric symposium sponsored by Children's Hospital and the George Washington University Medical Center.

Previous methods for diagnosing bacterial meningitis tested spinal fluid for cell count, gram stain, and growth of disease organisms in culture.

The culture took one to two days—a delay in diagnosis which often led to unnecessary hospitalization and antibiotic treatment.

"The latex agglutination test is potentially the best," said Dr. Ross, "if cross-reactions can be eliminated."

The test does not always differentiate between the types of bacterial meningitis caused by *Hemophilus influenzae* and *Pneumococcus*.

Latex agglutination was 90 percent accurate in identifying 12 patients with *H. influenzae* meningitis (including five who had received prior antibiotic therapy), while negative results were obtained for nine patients with aseptic meningitis, two with herpes simplex, and 18 non-meningitis patients.

The other four methods varied from 93 to 100 percent accuracy. Lactic acid gas chromatography was 100 percent accurate, as was lactic dehydrogenase for patients who had not been previously treated with antibiotics.

Limulus lysate was 98 percent accurate, and counterimmuno-electrophoresis accurately diagnosed 93 percent of the patients who had not received previous antibiotic therapy.—*National Institute of Health.*

Microscopic Changes in Fractured Rabbit Tibias

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M.M. PANJABI, DR. TECH., AND W.O. SOUTHWICK, M.D.

ABSTRACT—Clamps attached to rabbit tibias exerted continuous compression at transverse osteotomy saw cuts. At short intervals, from 21 to 56 days after the osteotomy, tibias were excised and fractured with a torsional force. After 21 to 41 days the fracture occurred through the osteotomy site containing a woven bone callus with thin trabeculae, large vascular spaces, many islands of cartilage and high radiolucency. After 43 to 47 days the fracture occurred partially through the shaft and partially through the osteotomy site containing a woven bone callus with thick trabeculae, small vascular spaces, little cartilage and high radiopacity. After 49 to 56 days a callus with a similar structure completely resisted fracture with the break occurring elsewhere along the shaft, even in malaligned tibias. Although the callus woven bone matrix was fused with that of the original compact shaft bone, polarized light examination did not reveal any collagen fibers bridging the junction between the two.

Broken bones are one of our major health problems. In the United States in 1973, 27.5 million work days were lost due to disability caused by bone fractures. Obviously, it is important that the clinician know what mechanical environment is best for fracture healing. Unfortunately this is not known.[1] For instance, the range of treatment of a fractured tibia is wide. At one extreme an operation is performed that exposes the bone so that a metal plate can be screwed into it to firmly secure the perfectly aligned broken ends together. Not only does the patient have to undergo the risk of anesthesia and operative complications, but he or she must also pay the high cost of the operation and the extended hospital stay. Once the patient begins to ambulate, the metal plate eliminates physiological loading of the healing bone at the fracture site. At the other extreme the patient's leg is placed in a plaster cast and he or she is allowed to ambulate soon after. This allows the patient an early return to work that minimizes the financial loss caused by the fracture. However, the use of the cast does not result in a perfect alignment of the broken ends of the bone and the fracture site of the healing bone is subjected to a physiological loading as the person ambulates.

The ideal laboratory experiment to test the best method of treating a bone fracture can only serve as a general indicator. This is due to the fact that the laboratory experiment in all its aspects can be carefully controlled, whereas, this is virtually impossible in a clinical study of human patients with broken bones. To begin with, the acquisition of a tibial fracture is a purely accidental process that differs from one patient to the next. Even so, this animal experiment was performed so that it could serve to indicate the general nature of the events that occur when a person fractures his or her tibia, and to determine the strength of the fracture site as the repair process is occurring.

Yamagishi and Yoshimura[2] studied the repair of fractured rabbit tibias but did not determine the strength of the fracture site during the healing

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process. The biomechanical aspects of this experiment have been published in detail elsewhere.[3] [4] [5] Therefore, only a minimum of the biomechanical data is included in this report of the previously unpublished microscopic analysis of the tissues involved.

Materials and Methods

Thirty-three adult female New Zealand rabbits weighing 4-4.5 kg were used. They were anesthetized, their hind limbs shaved and four 1.6 mm Kirschner wires were inserted transversely, two above and two below the midshaft of the tibia of each leg (Figure 1). Compression clamps were attached to the Kirschner wires, one on each side of each tibia (Figure 1). The midshafts of the tibias were then exposed and a transverse osteotomy was made with an oscillating saw while the bone was cooled with refrigerated Ringer's solution (Figure 2). Four rabbits did not have their tibias transected to serve as sham operated controls. The severed ends of the transected tibias were carefully approximated while the clamps were adjusted to exert 20 newtons (2 kg) of constant compression at the osteotomy site. On one leg, either left or right, an apparatus was attached to the clamp that exerted a superimposed 20 newtons of cyclical compression at the osteotomy site at 55 cycles per minute for two hours each morning and afternoon (Figure 3). Following the operation, each rabbit was supported on a sling beneath its chest and abdomen. The forelimbs were able to touch a platform whereas the hindlimbs were unsupported.

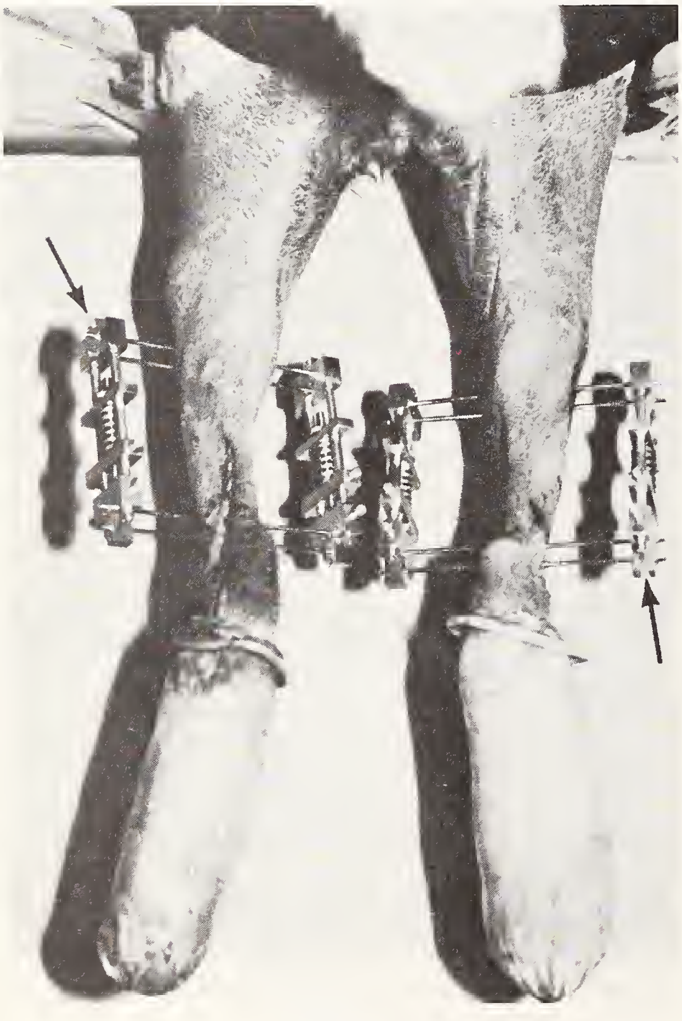

Figure 1
Posterior view of the shaved hindlimbs of a rabbit. A compression clamp (arrow) is attached to each tibia with Kirschner wires.

Rabbits were sacrificed at 1-5 day intervals between 21 and 56 days following the osteotomy operation.

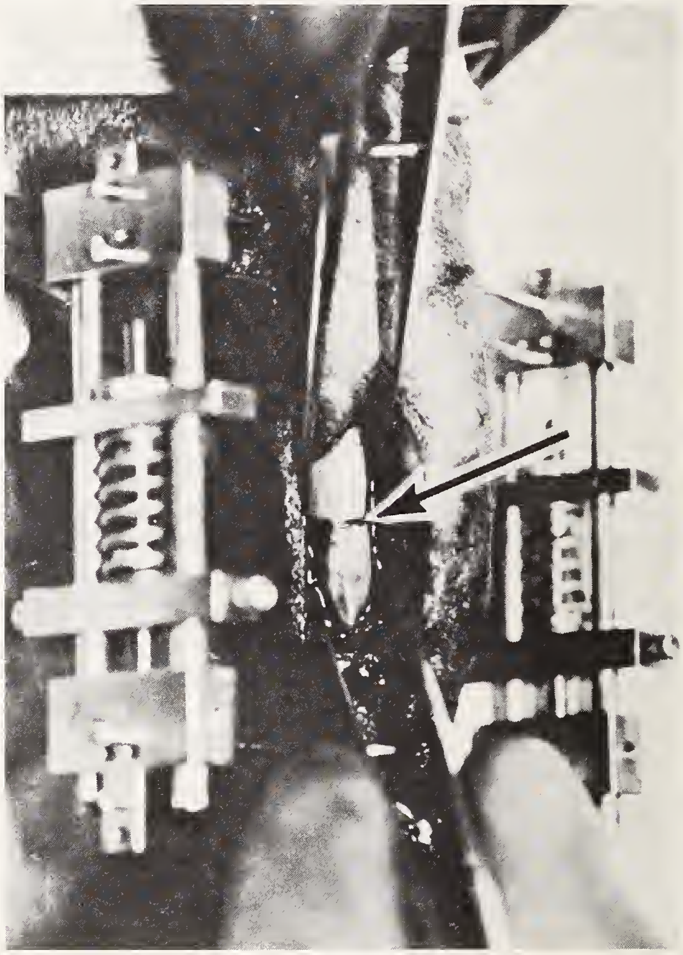

Figure 2
Posterior view of right hindlimb of a rabbit. The exposed tibia has been osteotomized. Arrow indicates the transverse saw cut.

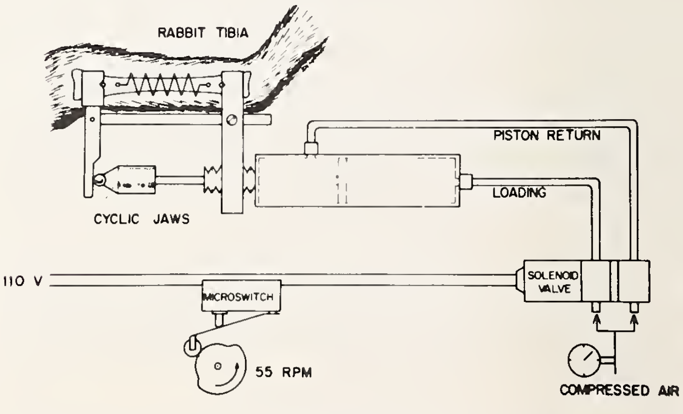

Figure 3
Block diagram of the cyclical loading system. A cam microswitch triggers the solenoid valve 55 times per minute by letting compressed air pass into the cylinder attached to the cyclic jaws. This applies a compressive force to the two outermost Kirschner wires which is transmitted to the osteotomy site.

After the compression clamps were removed the tibias were disarticulated at the knee and ankle and skinned, leaving the muscles intact. The two ends of each tibia containing the Kirschner wires were embedded in quick-drying polyester resin to ensure a precision fit and fixation of each bone in a torsion-testing machine (Figure 4). Roentgenograms were made of each tibia before it was attached to the machine. A weighted rotating pendulum twisted each tibia until it fractured (Figure 4). Connected to the torsion-testing machine was a dual-beam oscilloscope and a mini-computer that determined the maximum torque, torsion angle, energy absorption and stiffness of the bones as they were fractured. Roentgenograms were made of the tibias immediately after they were fractured. The bones with attached musculature were then preserved in 10% formalin, decalcified, embedded in paraffin, longitudinally sectioned serially at 6 μm and stained with hematoxylin and eosin for microscopic study with ordinary light. The tissue sections were also studied microscopically using polarized light to determine the density and arrangement of the birefringent, or doubly refractive, collagen fibers.

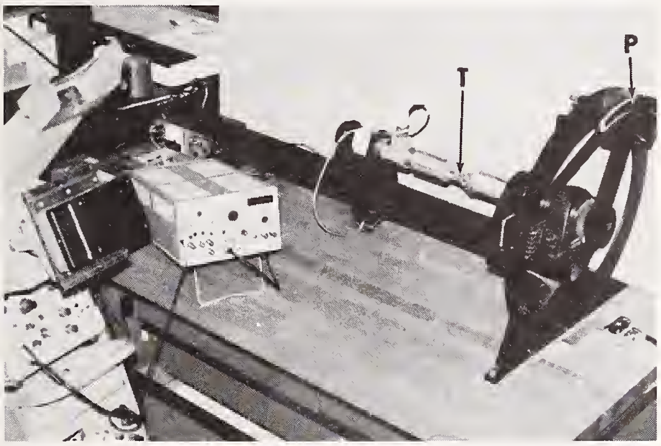

Figure 4
Shown is the torsion-testing machine. T - rabbit tibia attached to the machine. P - weighted pendulum.

Results

Based on the analysis of the torque-angle curves and the roentgenographic findings of the healing osteotomized tibias fractured by torsion, four biomechanical stages of bone healing were defined.[4] These stages correlated with progressive increases in resistance to torsional fracture as the healing time of the original osteotomy progressed.

Stage I was the torsional fracturing of the bone through the original osteotomy site with a low-stiffness, rubbery pattern (Figures 5, 7, 8). Stage II was the torsional fracturing of the bone through the original osteotomy site but with a high-stiffness, hard tissue pattern (Figures 6, 7). Stage III was the torsional fracturing of the bone partially through the original osteotomy site and partially through the previously intact part of the shaft with a high-

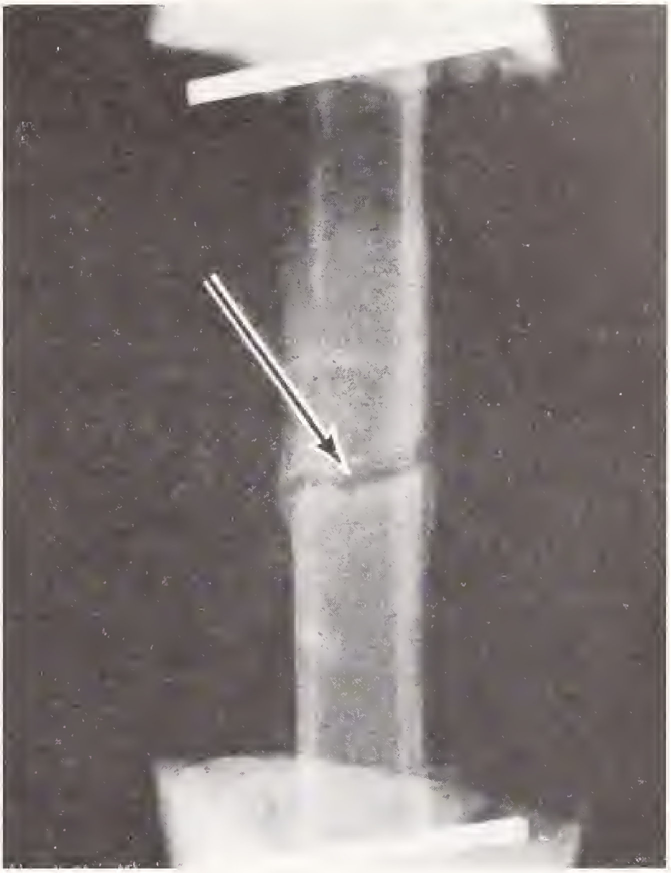

Figure 5
Roentgenogram of an excised Stage I tibia 21 days after the osteotomy operation. Arrow indicates the radiolucent osteotomy site.

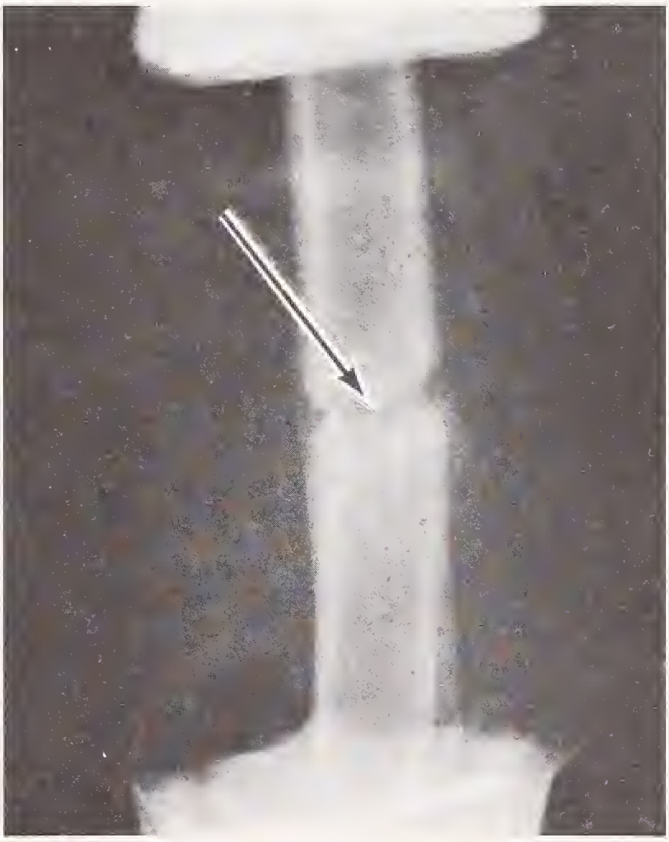

Figure 6
Roentgenogram of an excised Stage II tibia 27 days after the osteotomy operation. Arrow indicates the radiopaque osteotomy site.

stiffness, hard tissue pattern (Figures 9, 10). Stage IV was the torsional fracturing of the shaft of the bone at a site other than that of the original osteotomy site with a high-stiffness, hard tissue pattern (Figures 11, 12). In all of the stages the resistance to torsional fracture in the healing osteotomized tibias was not preferentially enhanced by either constant compression or by cyclic compression superimposed upon constant compression.[5]

The microscopic findings of the Stage I tibias were similar. After 21 to 26 days of healing time no trace was found of the blood clot that formed when the original osteotomy was performed. A periosteal callus, consisting of woven bone trabeculae, relatively large vascular spaces and islands of cartilage, encircled the osteotomy site (Figure 13). Trabeculae of woven bone filled a 1-2 mm gap between the ends of the original tibial shaft of compact bone. This woven bone was continuous with the periosteal callus woven bone trabeculae and internally with an endosteal callus of woven bone trabeculae within the marrow cavity. The mucoprotein ground substance of the new woven bone was continuous with that of the periosteal, endosteal, and osteotomized surfaces of the original compact bone of the shaft. However, polarized light revealed that the density and pattern of collagen fiber arrangement within the ground substance of the woven bone were quite different from that in the compact bone of the shaft (Figures 14, 15).

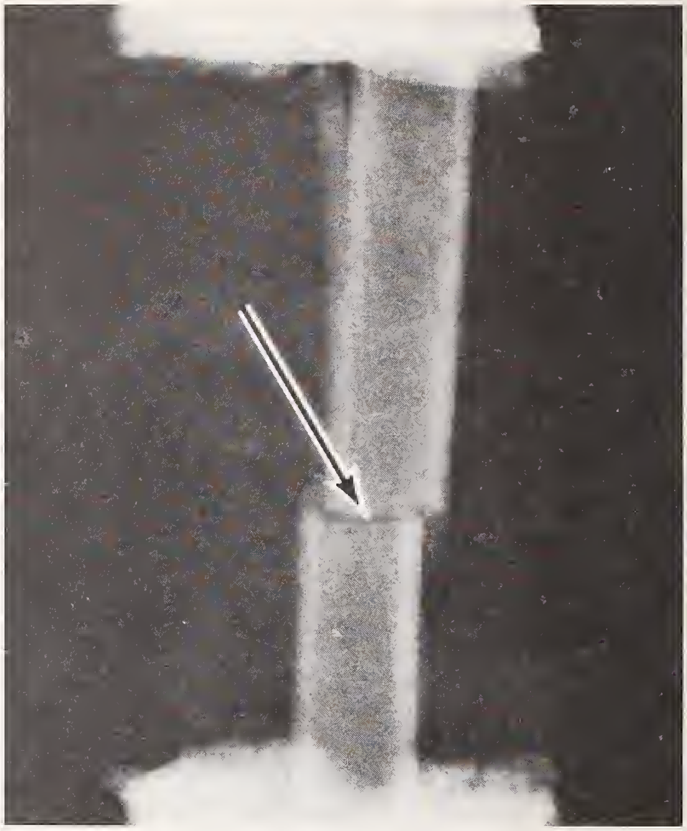

Figure 8
Roentgenogram of an excised Stage I malaligned tibia 25 days after the osteotomy operation. Arrow indicates the radiolucent osteotomy site.

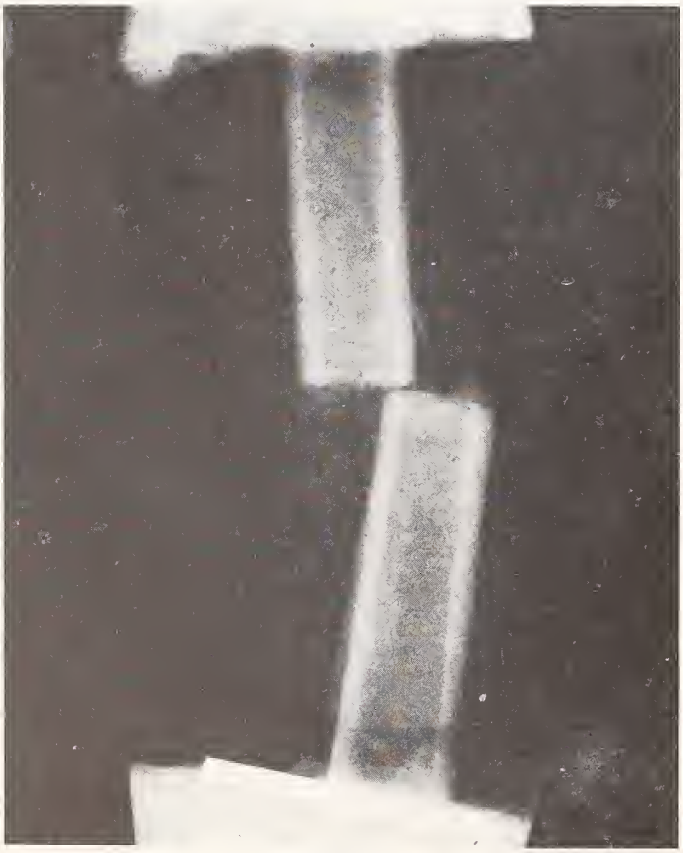

Figure 7
Roentgenogram of an excised Stage II tibia taken immediately after torsional fracture. The break occurred through the osteotomy site.

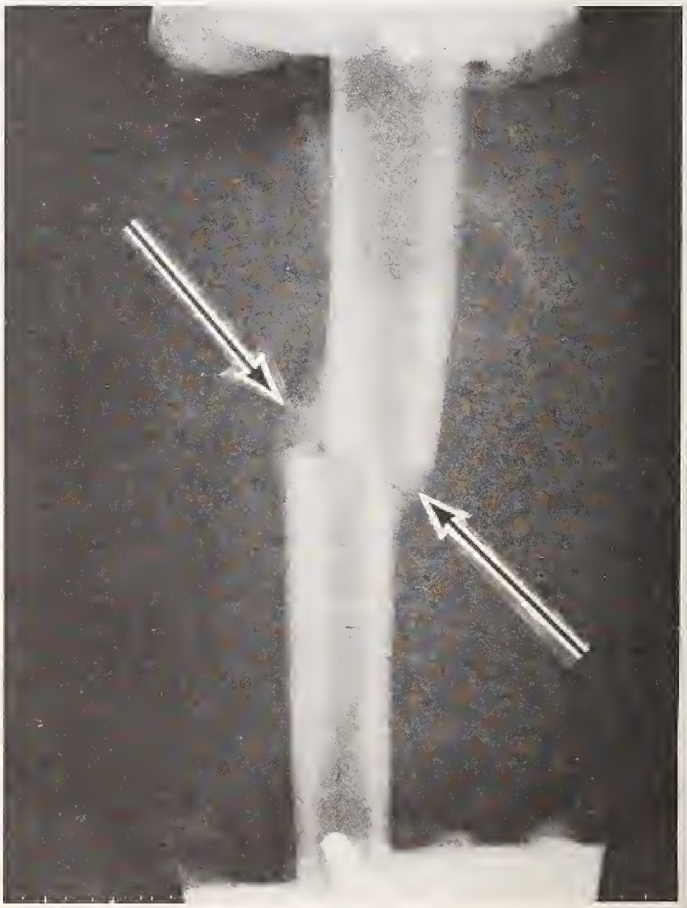

Figure 9
Roentgenogram of an excised Stage III malaligned tibia 44 days after the osteotomy operation. Arrows indicate the radiopaque callus.

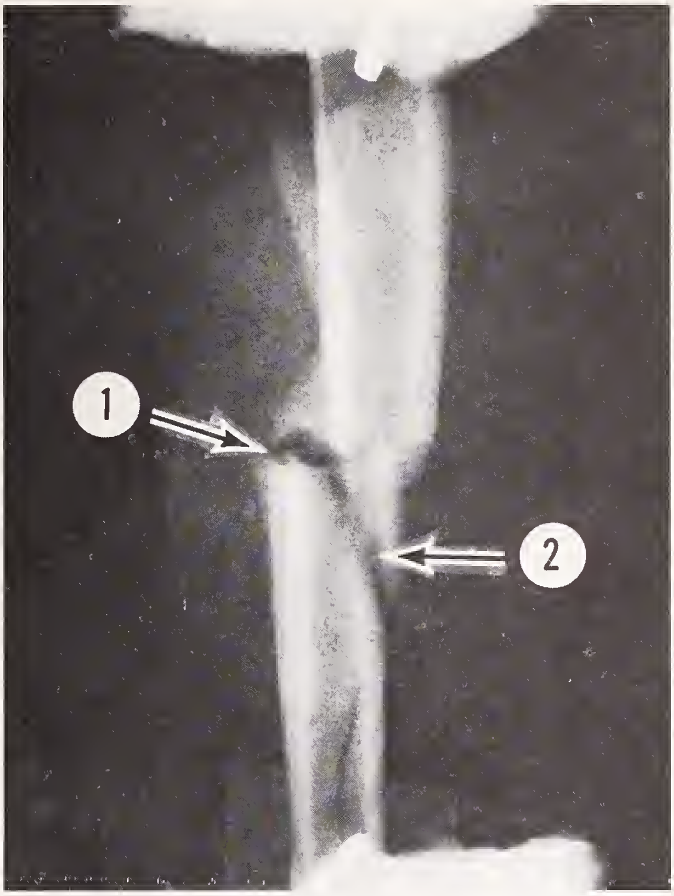

Figure 10
Roentgenogram of the same tibia shown in Figure 9 immediately after torsional fracturing. 1 - portion of fracture through osteotomy site. 2 - portion of fracture through the shaft.

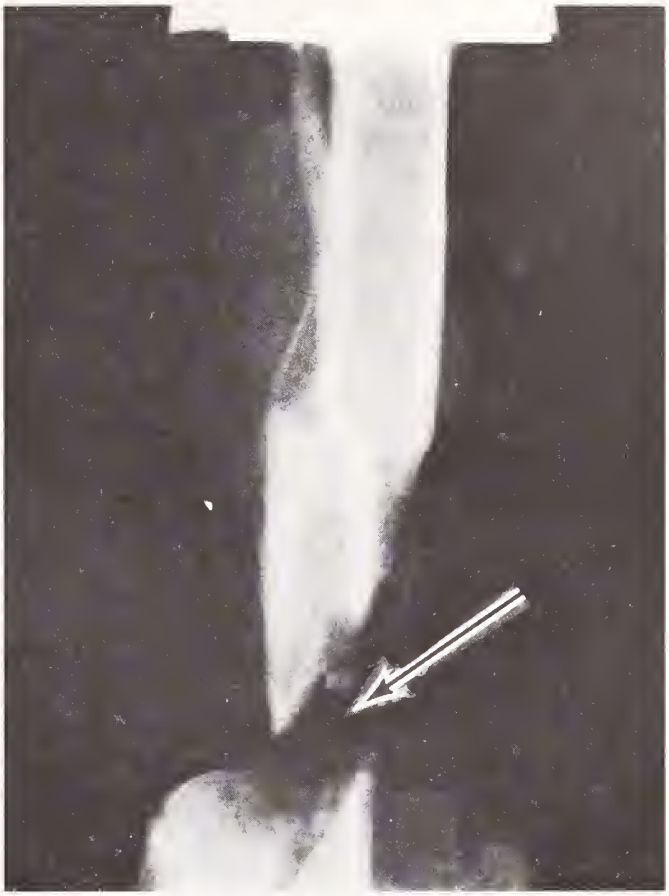

Figure 12
Roentgenogram of the same tibia shown in Figure 11 immediately after torsional fracturing. Arrow indicates the fracture through the shaft.

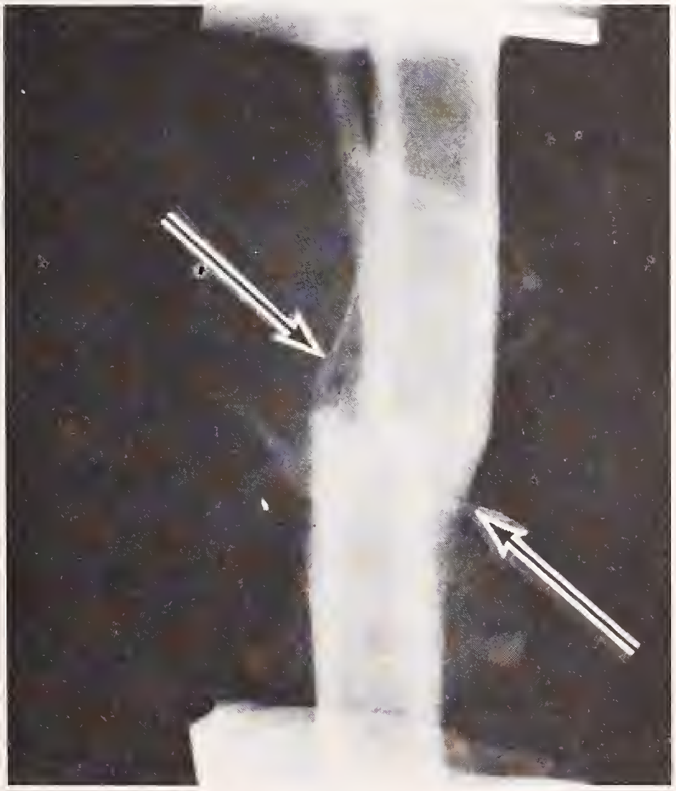

Figure 11
Roentgenogram of an excised Stage IV malaligned tibia 56 days after the osteotomy operation. Arrows indicate the radiopaque callus.

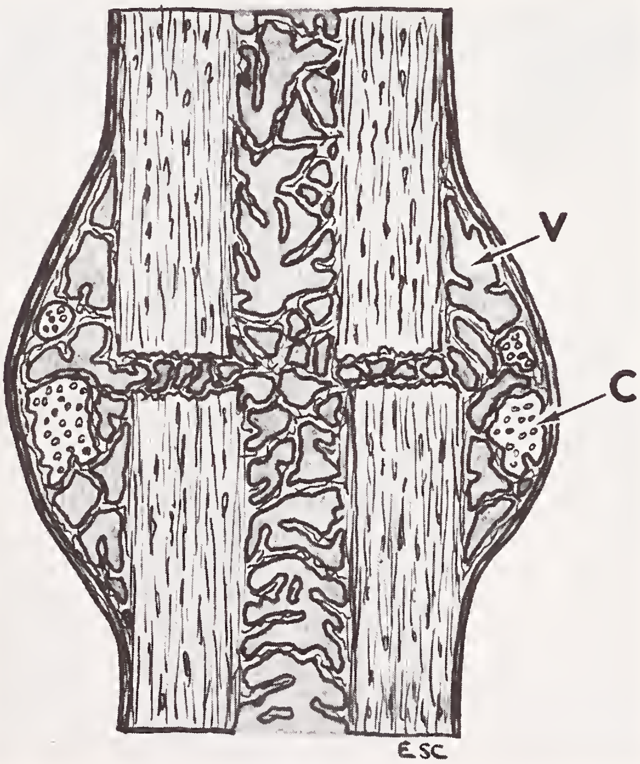

Figure 13
Drawing of a longitudinal microscopic section through the osteotomy site of a Stage I or II tibia. V - vascular space in the periosteal portion of the callus. C - island of callus cartilage.

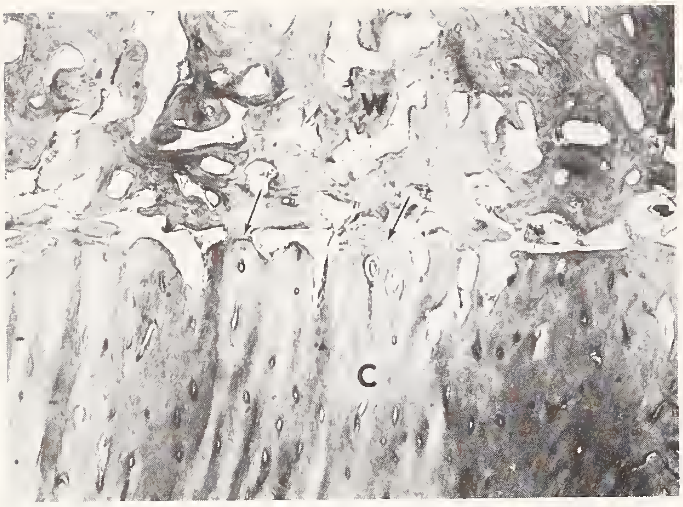

Figure 14
Longitudinal microscopic section of a Stage I tibia 26 days after the osteotomy operation. Arrows indicate artifactual spaces at the junction of the woven bone (W) of the callus and the compact bone (C) of the shaft. X28

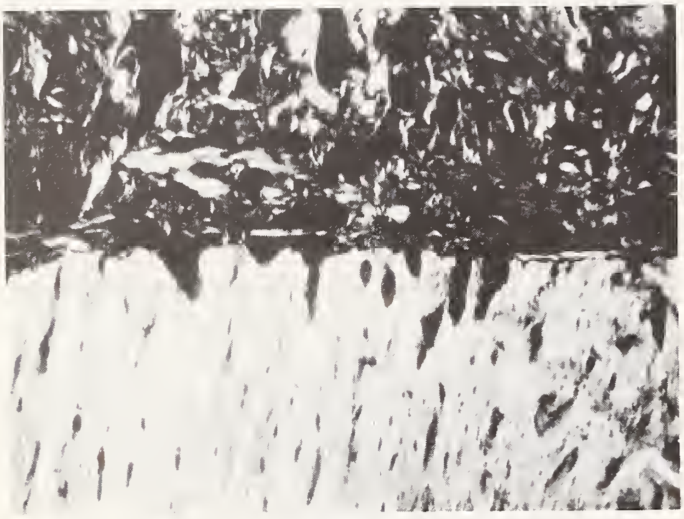

Figure 15
The same section shown in Figure 14 viewed with polarized light.

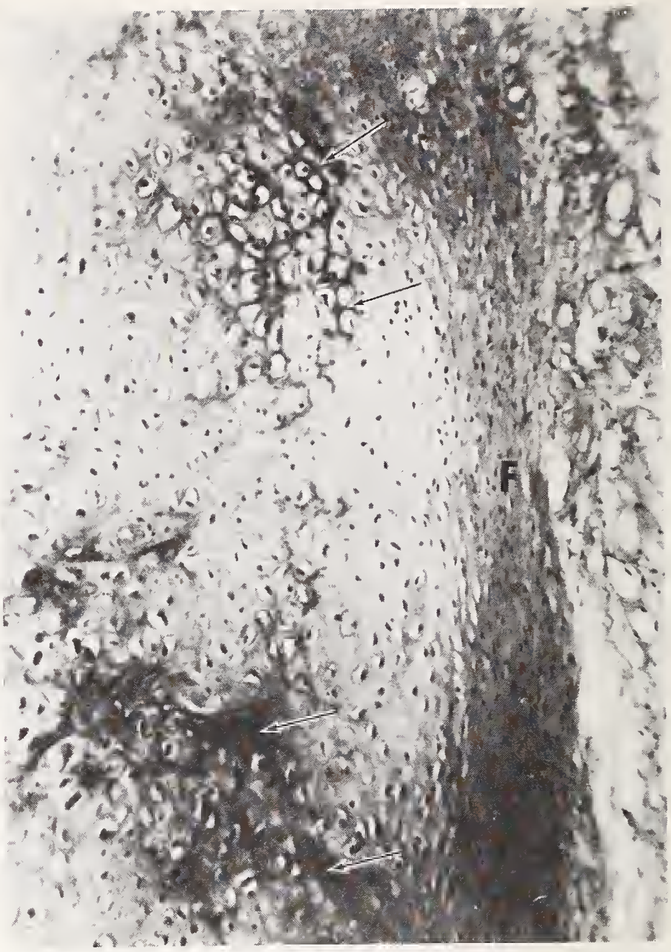

Figure 16
Microscopic section through an island of callus cartilage of a Stage I tibia 26 days after the osteotomy operation. Arrows indicate darker stained matrix that was calcified. F - outer fibrous portion of periosteum. X28

A 360° rotation of the tissue sections when viewed with polarized light failed to reveal any collagen fibers bridging the junction of the compact bone of the shaft with that of the woven bone of the callus. Additional evidence that none did was the common occurrence of tissue fixation artifacts in the form of spaces where the woven bone abutted the compact bone (Figure 14). The roentgenograms showed relatively high radiolucency in the woven callus bone, indicating only a small amount of inorganic material within its matrix (Figures 5, 8). This accounted for the low-stiffness, rubbery pattern in the Stage I tibias when subjected to torsional fracturing. Additional factors that contributed to this pattern were the presence of relatively large amounts of cartilage and large vascular spaces within the callus (Figure 16). In this experiment cartilage was found only in the periosteal portion of the callus. There was no difficulty in reconstructing the microscopic status of the Stage I tibias prior to torsional fracturing because the break occurred in a straight transverse line through the new woven bone of the original osteotomy site (Figure 7). About half of the Stage I tibias were malaligned at the original osteotomy site prior to torsional fracturing (Figure 8). The same incidence of malalignment was also found in the tibias of Stages II, III, and IV. The malalignment was not preferentially related to the application of constant compression alone or of constant plus cyclical compression during the healing period. It also did not noticeably alter the microscopic structure of the callus when compared with the tibias that had a relatively good alignment, except that the total mass of the callus was greater in the malaligned tibias.

The microscopic findings of the Stage II tibias were similar to each other and to those of Stage I. The Stage II tibias were from rabbits sacrificed between 27 and 41 days following the original osteotomy operation. The microscopic structure was identical to that of the Stage I tibias. Therefore, the only way to account for the sudden onset of high-stiffness, hard tissue pattern of resistance to torsional fracturing at 27 days of healing time was the increased amount of inorganic material in the callus bone matrix. This was evident in the presence of increased radiopacity in the callus bone seen in the roentgenograms of the Stage II tibias prior to torsional fracturing (Figure 6). Even so, the torsional fracture occurred directly through the original osteotomy site, just as it did in the Stage I tibias (Figure 7).

The microscopic findings of Stage III tibias were similar. They were from rabbits sacrificed between 43 and 47 days following the original osteotomy operation. When compared with the tibias of Stage II the number of trabeculae of the woven callus bone was greater at the expense of the vascular spaces. There were smaller and fewer islands of cartilage in the periosteal portion of the callus (Figures 17, 18, 19). The overall size of the callus was larger in the malaligned tibias. It was found that the greater the malalignment, the greater the size of the callus. The density of the radiopacity of the callus bone on the roentgenograms was greater than that of the Stage II tibias, indicating the greater presence of inorganic material (Figure 9). All of these factors contributed to a greater resistance to torsional fracturing because the Stage III tibias broke partially through the original osteotomy site and partially through the previously intact part of the shaft with a high-stiffness, hard tissue pattern (Figure 10).

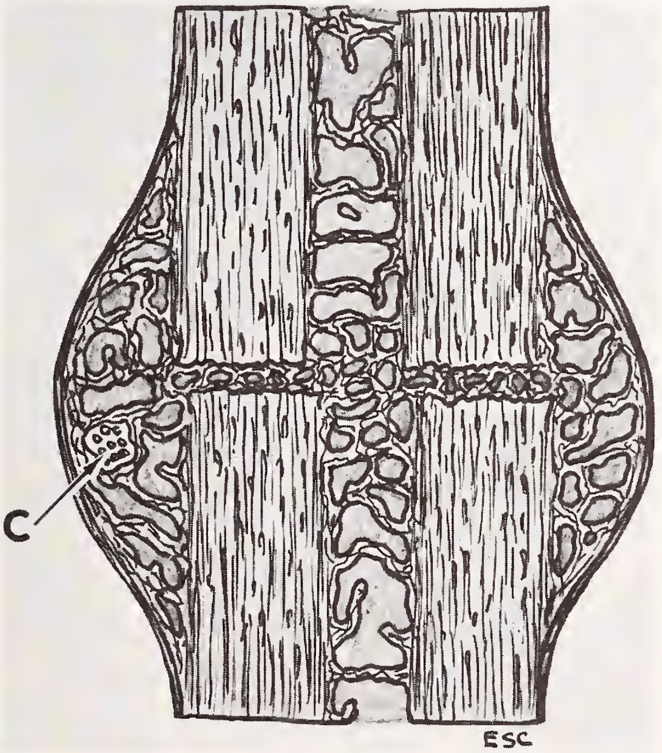

Figure 17
Drawing of a longitudinal microscopic section through the osteotomy site of a Stage III tibia. C - island of cartilage in periosteal portion of callus.

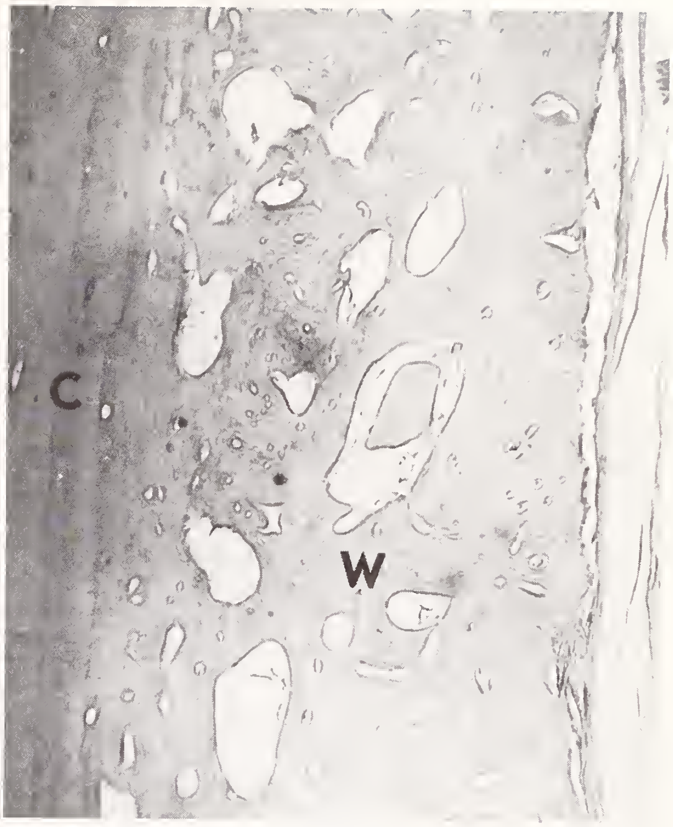

Figure 18
Microscopic section through the periosteal portion of the callus near the osteotomy site of a Stage III tibia 44 days after the osteotomy operation. The woven callus bone (W) containing relatively small vascular spaces is fused to the outer surface of the compact bone (C) of the shaft. X28

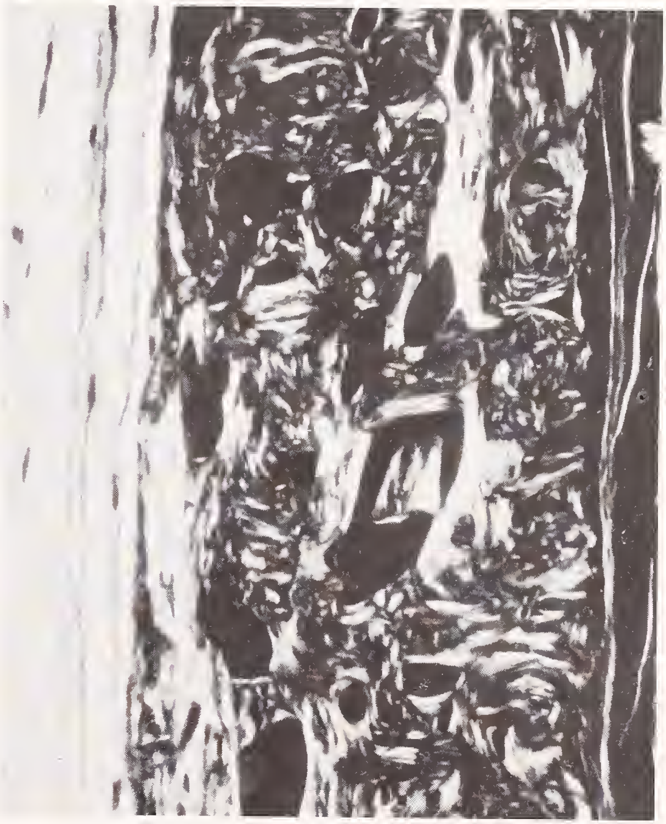

Figure 19
The same section shown in Figure 18 viewed with polarized light.

The microscopic findings of Stage IV tibias were similar to each other and to those of Stage III. The Stage IV tibias were from rabbits sacrificed between 49 and 56 days following the original osteotomy operation. Callus cartilage was absent (Figure 20). Even though over half of the tibias were malaligned, the woven bone of the large calluses was sufficiently strong to resist fracturing when the torsional force was applied. All of the tibias of Stage IV broke completely through the previously intact part of the shaft with a high stiffness, hard tissue pattern (Figures 11, 12). In the tibias with a good alignment of the shaft at the osteotomy site there was a 2 mm or more gap between the compact bone of the original ends of the shaft, which prevented an osteonal bony union between the ends. The gap was filled with woven bone. In the extremely malaligned tibias the woven bone of either the periosteal or endosteal portion of the callus was fused to extensive portions of the surface of the originally osteotomized ends of the shaft (Figure 20). The mucoprotein ground substance of the woven callus bone was continuous with that of the compact bone of the original intact shaft (Figure 21). However, polarized light revealed that the density and pattern of collagen fiber arrangement of the woven and compact bone were quite different (Figure 22). A 360° rotation of the tissue sections failed to reveal any collagen fibers bridging the junction of the compact bone of the shaft with that of the woven bone of the callus. This was also true of the sections of all of the other tibias of the experiment. Tissue fixation artifacts in the form of spaces where the woven bone abutted the compact bone were common occurrences in the sections of Stage IV tibias, as well as in those from all of the other tibias of the experiment (Figure 21).

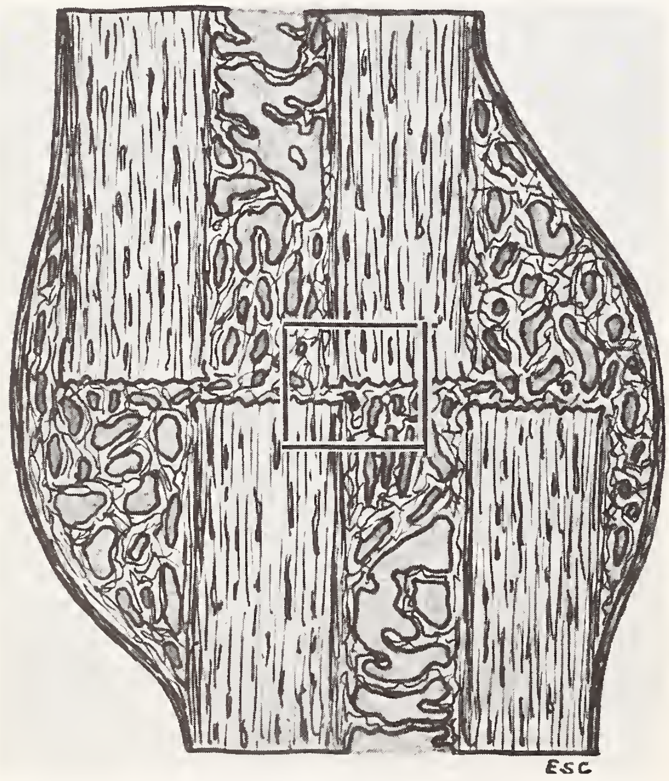

Figure 20
Drawing of a longitudinal microscopic section through the osteotomy site of a Stage IV malaligned tibia. Rectangle demarcates region of section shown in Figures 21 and 22.

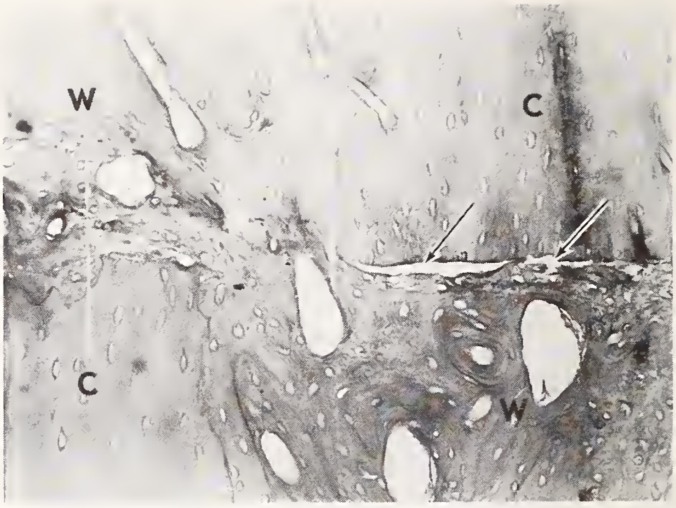

Figure 21
Microscopic section through the portion of the osteotomy site outlined in Figure 20 from a malaligned Stage IV tibia 56 days after the osteotomy operation. Arrows indicate an artifactual space at the junction of the woven bone (W) of the callus with the compact bone (C) of the shaft. X80

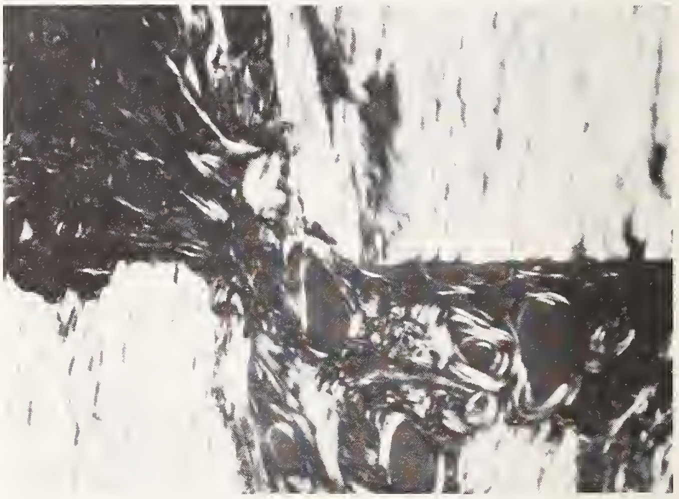

Figure 22
The same section shown in Figure 21 viewed with polarized light.

Discussion and Conclusions

The sequence of microscopic changes occurring during the repair of the osteotomized tibias was essentially the same as that found during the repair of experimentally fractured tibias and ribs in rabbits.[2] [6] Microscopic sections of fracture sites of long bones in man, obtained by biopsy and at autopsy, revealed that the repair process follows essentially the same pattern as that seen in rabbits.[2]

Recently, a so-called "Swiss" method of modifying the sequence of events in fracture repair has received much attention.[7] The experimental method involved the stripping away of periosteum followed by transection of the tibia in sheep using a saw. Rigid stabilization of the transection site was attained using a thick metal plate screwed to the tibial shaft. This maintained the transected ends of the shaft in direct contact, in perfect alignment, and under continuous compression for as long as 16 weeks. Little, if any, callus formed. The healing of the transected ends of the shaft was chiefly by osteonal remodeling. Osteoprogenitor cells derived from the opened osteons of the shaft formed new or secondary osteons that bridged the severed ends and joined them together. Although there was early ambulation of the sheep due to the use of the metal plate, once it was removed the tibia fractured easily. Although a perfectly aligned, healed fracture site lacking a callus may be aesthetically desirable, the union of the severed ends of a bone primarily by secondary osteons is a weak one.

The failure to detect collagen fibers bridging the junction of the woven callus bone with that of the compact shaft bone indicates that each callus initially "glued" the osteotomized ends of the shaft together by a fusion of its amorphous mucoprotein ground substance with that of the shaft. In time, reinforcement of this fusion occurred by the deposition of mineral crystals within the ground substance between the collagen fibers, as well as upon and within them.

Although the osteotomized sites of the rabbit tibias of the present experiment lacked early rigidity afforded by a metal plate, the callus bone that formed became increasingly resistant to fracture as the healing time increased. The fact that woven callus bone, even in the markedly malaligned tibias, became so highly resistant to torsional fracturing, demonstrates that the formation of a substantial callus is the most natural and efficacious method of fracture repair that has evolved by natural selection during the millions of years of mammalian evolution.

The findings of Saha[8] explains why the tibias of Stage IV broke completely through the compact bone of the intact part of the shaft rather than through the cancellous bone of the callus. His experiments of dynamic compression testing of human compact and cancellous bone revealed that most of the compact bone specimens failed without any significant change in their cross section, indicating the brittle behavior of mature bone. However, due to the irregular nature of the trabecular organization of cancellous bone even a pure compression produced torsion and bending of individual trabeculae. With increasing strain all of the trabeculae did not fail simultaneously which proved that they did not reach their ultimate load carrying capacity at the same time. Thus, cancellous bone absorbs a considerable amount of shock energy by microcracking of some trabeculae without causing catastrophic failure.

It was anticipated that the cyclical compression in comparison to continuous compression alone would enhance fracture repair, since it occurs in nature due to the lack of splinting and frequent attempts by an animal to ambulate. When man's ancestors began to stand erect millions of years ago, their healing fractured tibias were likewise subjected to intermittent compression. It is assumed that cyclical compression in the present experiment failed to enhance fracture healing mainly because the amount of forces used, to compare the effects of continuous compression alone with continuous compression plus cyclical compression, were not dissimilar enough. This aspect of the experiment is being repeated.

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Noninvasive Diagnosis of Abdominal and Pelvic Abscesses

KENNETH J.W. TAYLOR, M.D., PH.D., F.A.C.P.

Fever of unknown origin is a common presentation of patients with inflammatory, neoplastic or thrombotic conditions. In the post-operative patient, fever may indicate pulmonary complications such as hypostatic pneumonia or atelectasis, deep vein thrombosis and pulmonary embolism, local wound abscess or the distant spread and localization of purulent material, particularly in the subphrenic spaces or the pelvis.

The value of clinical examination in the differential diagnosis of fever of unknown origin can not be overstressed. Signs of atelectasis or consolidation at the lung bases, confirmed by plain radiography, results in early diagnosis and implementation of proper management. In the young drug-abuser, bacterial endocarditis must be considered, particularly involving the right side of the heart after intravenous administration of non-sterile material. In these patients, clinical examination, blood cultures, and echocardiography should be performed. In patients with fever, leukocytosis and shift to the left, frequently marked toxicity with or without localizing signs, the possibility of an abdominal or pelvic inflammatory process with abscess formation must be considered. Again, clinical examination may yield localizing signs leading to early diagnosis and immediate surgery, as for example, in appendicitis. In other patients, a nonspecific finding such as right upper quadrant tenderness, may lead to a differential diagnosis including acute cholecystitis, empyema of the gallbladder with or without perforation, subhepatic abscess, perinephric collection or urinary tract infection.

Plain radiography of the abdomen may be most helpful and may include the demonstration of a soft tissue mass, a collection of extraluminal gas, displacement of viscera, loss of normally well-defined structures such as the psoas margin, fixation of a normally mobile structure, paralytic ileus, scoliosis and elevation or splinting of the diaphragm. In the author's experience, diaphragmatic paresis is an unreliable sign of subphrenic abscess.

For the exclusion or localization of an abdominal or pelvic abscess in the post-operative patient, a clear understanding of the anatomic pathways is necessary. The important peritoneal spaces were described by Corning[1] and their radiological significance has been stressed more recently by Meyers.[2] Anatomically, the transverse mesocolon divides the abdomen into a supra- and infra-mesocolic area. These compartments communicate along the paracolic gutters, which direct the spread of purulent material into the subhepatic or subphrenic spaces above, or the pelvis below. The movement of this material occurs under gravity since the hepato-renal pouch (or Morison) is the lowest part of the abdominal cavity in the supine position, and the recto-vesical or Pouch of Douglas is the lowest part of the pelvic cavity in either the erect or supine position. Thus, for anatomical reasons, purulent material tends to drain down the paracolic gutters and localize in either the subphrenic spaces or in the pelvis. This is an important point when considering the newer diagnostic techniques which have recently become available for the diagnosis of abscesses.

Newer Diagnostic Techniques: ^{67}Gallium

^{67}Gallium citrate has been used for the diagnosis and localization of abdominal and pelvic abscesses.[3-5] It has a high sensitivity but a rather low specificity. Its high sensitivity makes it useful as a screening agent, particularly for the early detection of bone infection which may not be apparent by other imaging studies. It does, however, have marked limitations, in that the isotope is expensive and the study may take several days to complete. Since gallium is excreted through the biliary system into the gut, persistent activity in the gut may require several rescans after bowel washout procedures. Thus, in anatomical sites where abscesses coincide closely with the position of bowel,

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gallium has definite limitations. In addition, gallium is taken up by tumors as well as inflammatory lesions, so that the lack of specificity is a problem. Even when gallium is taken up by inflammatory lesions, it is important for clinical purposes to differentiate between a solid phlegmon and an abscess cavity. For example, gallium is taken up both by pancreatic phlegmon and an abscess, but the surgical treatment of the two conditions differs radically. A technique must be used which differentiates between solid and cystic consistencies. Either ultrasound of computerized tomography are ideal for this purpose.

Gallium may be used successfully in conjunction with other modalities to demonstrate functional activity in a fluid-filled mass which is seen by other imaging techniques. It is also useful in bone infections and perinephric abscesses. In view of its limitations, gallium has limited utility as a general screening agent in the search for abscesses, but under certain specific conditions, may yield valuable information.

Computerized Tomography

The outstanding success of X-ray computerized tomography for the diagnosis of intracranial lesions has led to its enthusiastic application to the body.[6] In our limited experience there appears to be little advantage to computerized tomography compared with ultrasound, with the possible exception of retroperitoneal collections. These may produce paralytic ileus, when the air contained in the gut obscures the display of deeper tissues by ultrasound. Computerized tomography (CT), again, is a highly expensive technique which is relatively time-consuming and therefore unsuited to the screening of large numbers of patients with fever of unknown origin.

Enthusiastic advocates for CT scanning have also utilized the technique to guide aspiration of the abscess contents.[7] Since many of these machines require 2 - 3 minutes to reconstruct a single image for determining the position of the needle, this would appear to be an unnecessarily time-consuming procedure. If abscesses are to be drained, either diagnostically or therapeutically, dynamic (real time) ultrasound should be used, which provides up to 16 frames per second on equipment costing only one-tenth that of CT machines.

Ultrasound

From the anatomical considerations detailed above, purulent material tends to track and localize in the subphrenic or subhepatic spaces, or in the pelvis. In each of these anatomic sites, access of the ultrasound beam is easy, using the liver as an acoustic window in the right upper quadrant, the spleen in the left upper quadrant and the distended urinary bladder in the pelvis. Although one might expect to miss a number of abscesses in the mid-abdomen when pus collections lie deep to gas-containing gut, in practice gut is usually deflected, and mid-abdominal abscesses located. The major advantages of ultrasound are speed, economy and lack of ionizing radiation. The major disadvantage is the relative lack of adequately trained physicians and technicians, which may produce a large number of false-positive results.

The accuracy of ultrasound for the diagnosis of abdominal and pelvic abscesses has been reported from this institution.[8] Two-hundred and twenty patients with suspicion of an abscess were followed. Of these patients, 75 had abscesses—33 in the pelvis and 42 in the abdomen. Ninety percent of abdominal abscesses, and 97% of the pelvic abscesses were correctly demonstrated, giving an overall sensitivity of 93%. Equally important, of the 145 patients without abscesses, such pathology was correctly excluded in 143, giving a specificity of 98.6%.

Paramedian ultrasound sections through the right upper quadrant permit the display of intrahepatic, subhepatic or subphrenic abscesses (Figure 1). Perinephric collections and hydronephrosis are apparent and the presence of a pyohydronephrosis may be suspected when fine particulate matter is seen within the distended collecting systems. Evidence for a fluid collection surrounding the gallbladder raises the possibility of an empyema with perforation (Figure 2).

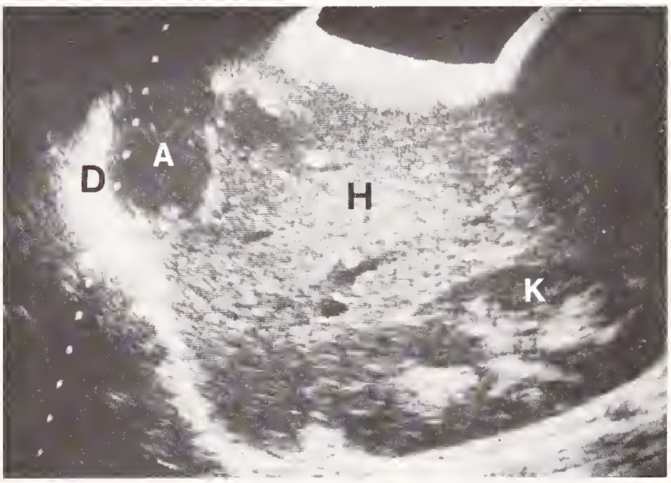

Figure 1

Longitudinal ultrasound scan showing the right subphrenic abscess. The liver (H) is seen, and the right kidney (K) is seen posteriorly. Immediately inferior to the diaphragm (D) there is a definite defect (A) which is consistent with a subdiaphragmatic abscess.

The left upper quadrant is usually examined best with the patient in the right decubitus position[9] (left side up). The transducer is placed in the lower intercostal spaces in the midaxillary line and simple scans performed in this plane. The spleen is then used as an acoustic window into the left subphrenic space. Free ascites must be differentiated from purulent collections. Abscesses tend to form a more spherical contour than ascites, which conform to the contours of the intact organs. Movement of the patient often demonstrates the free movement of ascites. However, the differentiation between an infected fluid collection and a nonseptic one may only be possible on clinical grounds or by aspiration (Figure 3). A pseudocyst of the pancreas often appears as a thick-walled cyst, which ultrasonically is indistinguishable from a pancreatic abscess. However, on clinical grounds the patient with a pancreatic abscess will be gravely ill, and this will lead to a strong suspicion of the correct diagnosis.

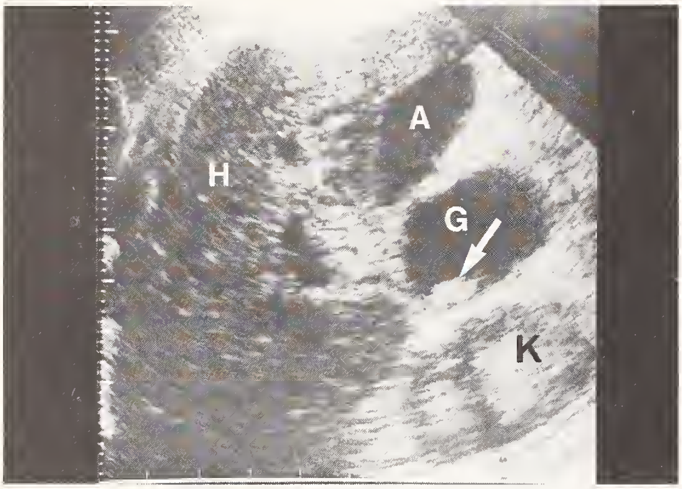

Figure 2
Longitudinal ultrasonogram of a perforated empyema of the gallbladder. The liver substance (H) is seen with the right kidney (K) posteriorly. Anterior to the right kidney the gallbladder (G) is seen, and this contains an opacity (arrowed) which is a gallstone. Superficial to the gallbladder is a further fluid-filled cavity (A), which contains fine particulate matter, and these appearances are consistent with a pericholecystitic abscess secondary to a perforated empyema of the gallbladder with cholelithiasis.

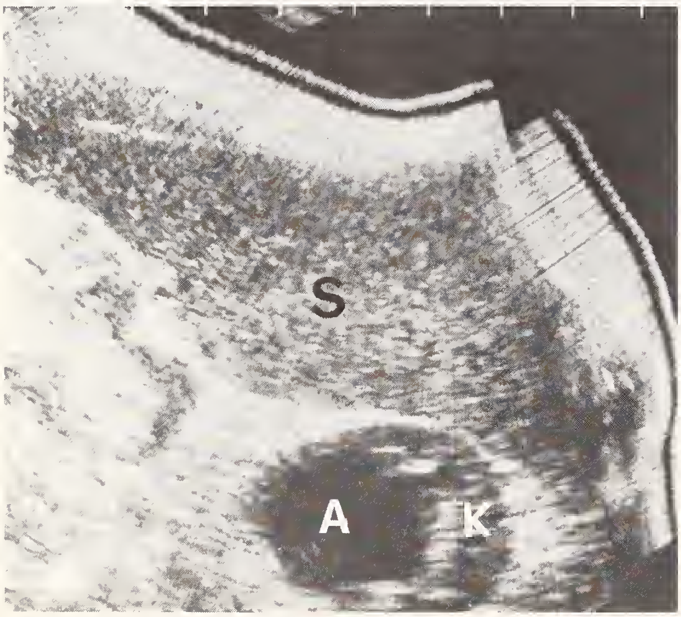

Figure 3
Longitudinal ultrasound scan in the midaxillary plane with the patient in the decubitus position. This patient has chronic leukemia and an enlarged spleen (S) is seen overlying the left kidney (K). On the medial border of the kidney a fluid-filled mass is seen (A). The appearances are indistinguishable from those of a simple renal cyst in this patient with fever and leukocytosis. Under ultrasound visualization, skinny needle aspiration of this cystic area yielded 100 ml of pus.

The pelvis is scanned in both transverse and paramedian planes, using the distended urinary bladder as an acoustic window. An abscess cavity is apparent as a relatively thick-walled fluid collection, either in the Pouch of Douglas or in the recto-vesical pouch (Figure 4). The differential diagnosis of fluid in the Pouch of Douglas includes an ovarian cyst, a blood collection such as an endometrioma, free ascites, or fluid in the gut. Attempts must be made to distinguish between these and again, the clinical examination is valuable. The patient with a pelvic abscess is usually exquisitely tender on pelvic examination. Ovarian cysts are often septated and nontender, while an endometrioma may closely simulate an abscess, but these patients will not usually have fever. Evidence for adenomyosis throughout the myometrium is very helpful in reaching the correct diagnosis of endometriosis. Free ascites should be easily excluded, again because it conforms to the contours of the surrounding organs, and moves freely with change in the patient's position. Fluid in the gut produces by far the most difficult appearances and can be confused with a pelvic abscess. A simple means for differentiating them is to rescan the patient after a bowel motion on the following day. Fluid in the gut will virtually always present a different configuration on the second day, while a pelvic abscess does not change its position or its shape. With high-resolution real time the patient can be scanned continuously looking for evidence of peristalsis. In practice, fluid in the gut is responsible for an incidence of false positive examinations, which in our hands has led to negative surgical findings in four patients.

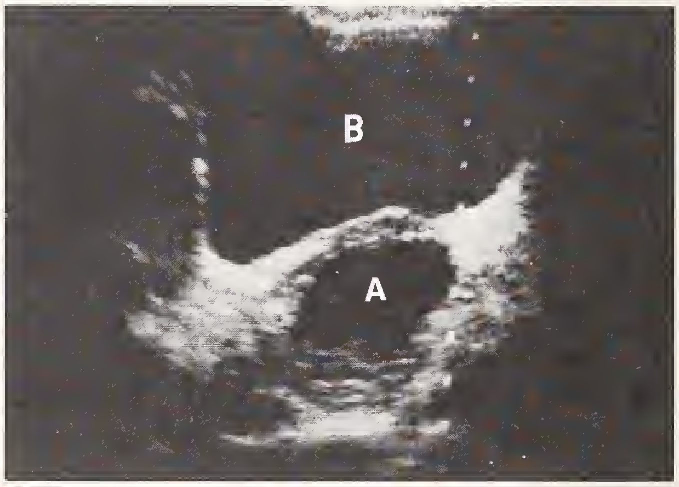

Figure 4
Transverse ultrasonogram to show pelvic abscess. The urinary bladder (B) is physiologically distended. Posterior to the bladder is an irregular fluid-filled mass (A) which is consistent with a pelvic abscess. This was a young patient with a perforated appendix and formation of a pelvic abscess which was subsequently drained.

Conclusion

Abdominal and pelvic abscesses are common problems in clinical practice and the value of the history and clinical examination in their diagnosis can not be overemphasized. At this institution, ultrasound is the most widely used modality for screening purposes, complemented by gallium scanning. The present limitations for radionuclide techniques may be overcome with the development of Indium-111-labeled white cells.[10] However, it should be stressed that this would demonstrate functional activity and not the anatomic difference between fluid or solid consistency, which is essential for the surgeon and is best demonstrated by ultrasound. When gallium uptake corresponds with a fluid collection seen by ultrasound, an abscess cavity is highly probable.

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New Drug Is Approved for Ocular Herpes Simplex

A new drug, Vidarabine, has been approved for the treatment of ocular herpes simplex virus, the most common cause of severe eye infection in the United States. The disease, which affects the cornea and iris, begins in childhood or during adolescence and frequently recurs, causing pain and visual disability throughout life. Idoxuridine (IDU), the only established treatment for herpes simplex keratitis, is generally effective, but its undesirable side effects have stimulated the search for new therapeutic agents.

Laboratory and clinical trials by Dr. Deborah Pavan-Langston and her associates at Harvard Medical School, Massachusetts Eye & Ear Infirmary, the Eye Research Institute of Retina Foundation, and Parke-Davis and Co., have demonstrated that vidarabine is effective for treating patients who cannot tolerate IDU or who develop IDU-resistant infections. This research was supported in part by NIH's National Eye Institute.

Herpes simplex virus infects about 80 percent of the population at least once a lifetime, usually causing cold sores, fever blisters or, in its more serious form, ulcerations of the genitals or scarring of the cornea and iris of the eye.

The 300,000 ocular herpes infections reported annually in the United States are caused primarily by Type I herpes, the same form of herpes that affects the mouth. When blindness occurs, the only way to restore vision is through corneal transplantation.

Until IDU became commercially available in the early 1960's, there were no drugs to treat ocular herpes. However, with increased use of IDU, more patients developed such complications from the drug as allergic reactions and toxicity symptoms. In addition, doctors noted several herpes infections were resistant to IDU.

Vidarabine appears to avoid these untoward effects. Of 116 patients who had shown no improvement when treated with IDU, 78 percent healed when switched to vidarabine. Dr. Pavan-Langston also reported that vidarabine was as effective as IDU in treating 169 patients with routine ocular herpes infections. The drug was also of great use in treating recurrent herpes in 146 patients intolerant of or resistant to IDU. None of these patients suffered the significant toxic reactions usually seen with prolonged use of IDU.

In laboratory studies with rabbits, Dr. Pavan-Langston compared the toxic effects of IDU and vidarabine on experimental corneal wound healing. Her tests confirmed that vidarabine is less toxic than IDU. This suggests that vidarabine might be useful in treating herpes infections following corneal transplantation.

Research on improved antiviral drugs to treat corneal infections is one of the highest priorities of the National Eye Institute. Studies are now underway to find drugs that can provide therapeutic access to deep-seated herpes infections. Nevertheless, vidarabine represents an improved step in the improvement of treatment of ocular herpes simplex infections.—*National Institute of Health*

Computerized Tomography in the Diagnosis of Sciatica

Computerized Tomographic Case of the Month

MICHAEL CRADE, M.D. AND STEPHEN L.G. ROTHMAN, M.D.

Introduction

Routine radiographic evaluation of low back pain usually includes lumbosacral spine films and if a nerve root compression is suspected, a myelogram. Although these modalities are clinically reliable, false negatives do occur. Overlying bowel gas and stool, for example, may obscure a destructive bone lesion compressing neural tissue. When nerve root compression occurs outside the confines of the neural canal myelography is often not beneficial.

The use of CT in evaluating the spinal canal has been previously reported.[1] [2] For the patient presented below it proved to be the most definitive diagnostic modality.

Case Report

Mr. W. is a seventy-three-year-old white male with a past history remarkably free of medical or surgical problems. He experienced the gradual onset of low back pain with radiation down the right leg. These symptoms intensified over a two month period before admission to Yale-New Haven Hospital.

Routine laboratory tests were normal. Lumbosacral spine films were normal.

At the time of myelography the radiologist discovered an irregularity of the border of the left kidney on routine preliminary films. The myelogram itself was entirely normal.

Bone scan demonstrated abnormal uptake of Tc pyrophospate in the right sacrum.

A CT scan was performed (Figure 1) which clearly demonstrates a large erosion of the sacrum by a mass lesion extending into the retroperitoneum. The neural foramina of the sacrum and the adjacent soft tissue structures, including the nerve roots themselves are severely compromised.

Subsequently, this lesion was proven to be a metastatic focus of a primary renal cell carcinoma and radiation therapy was begun. Even in retrospective analysis, no sacral lesion could be seen in either the myelogram or the routine sacral radiographs.

Discussion

Lesions destroying nerve fibers outside the spinal canal usually are not well seen by myelography as contrast material within the canal has only limited extension along nerve roots. Such lesions may be missed if bony destruction is not sufficient to cause radiographic abnormalities.

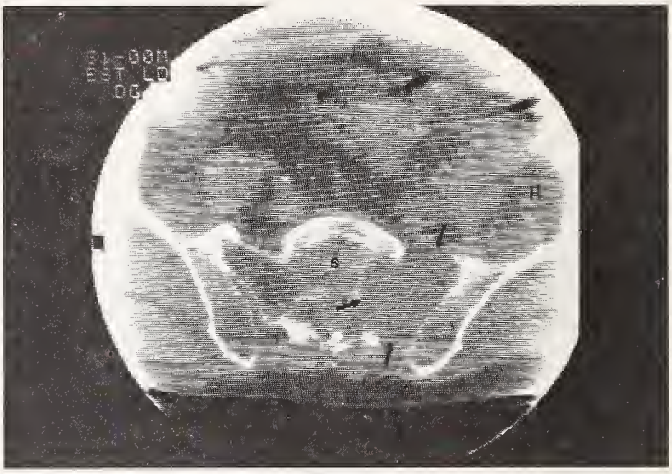

Figure 1
Axial section through the level of the sacroiliac joints. Left side (L) is normal. On the right side (R) a large mass as outlined by arrows has eroded the sacrum (S), causing this patient's sciatic type pain.

CT in addition to demonstrating the cross sectional anatomy of the spinal cord and intervertebral foramina also visualizes the surrounding structures in great detail.

Low back pain secondary to nerve root compression may, at times, have normal appearances at myelography and routine radiography, yet be dramatically abnormal on CT evaluation when the compression occurs along the course of nerves.

Bone scanning has proven most beneficial for screening such patients and for directing the CT evaluation to the proper bony section.

Although routine use of CT is not yet warranted for evaluation of all patients with low back pain, it has proved beneficial for those patients strongly suspected of having a localized lesion, possibly outside of the neural canal itself. Bone scanning is suggested for such patients prior to CT evaluation.

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MICHAEL CRADE, M.D., Senior Resident, Department of Diagnostic Radiology, Yale-New Haven Hospital.

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Our Federation: Stronger Than Ever

TOM E. NESBITT, M.D.
President, AMA

I begin my formal remarks by assuring you that I have given a great deal of time and thought to this, my first message as President of the American Medical Association.

I thought of the high honor that election to this office signifies, and I extend to you my sincere gratitude for that honor.

I thought of the heavy responsibilities that the coming year will bring in this time of ordeal, and opportunity, for American medicine.

And I extend to you my promise to do my utmost to help fulfill those responsibilities.

I also thought about, and summoned up the fortitude to *talk* about, what to my mind is *the* most imposing challenge for physicians today. I'm referring to the need for *individual physicians,* in their *own private practices,* to *voluntarily restrain the rate of professional fee increases.*

I'm well aware that historically, any discussion of the individual physician's right to determine professional fee levels has been all but forbidden ground for an officer of the AMA.

Despite that fact, I'm going to make this request a focal point not only of this inaugural, but also a focal point of my message to America's physicians during the coming year. And while this message will be informal to the extent that it calls only for voluntary responses by individual physicians, there are some very compelling reasons why physicians should comply.

If certain proposals now in the Congress are enacted, for example, the forbidden ground of professional fees will become a playground for legislators, economists, health planners, consumerists, and whomever.

I refer, of course, to the legislative proposals which would impose arbitrary revenue restraints on hospitals, and perhaps extend such restraints to private practice, as some have proposed; if these proposals *are* enacted, then we can forget all the rhetoric about issues such as health planning guidelines and national health insurance.

Because if government controls over hospital revenues and professional fees are added to *existing* controls arising from government's substantial health insurance financing commitments, then for all practical purposes government will, in fact *control* the quality, and the quantity (in terms of access), of the medical care system as a whole.

In short, the rationing of care, à la the British National Health Service, will be imposed on America. And while recent polls show that a majority of Americans favor national health *insurance,* they are against a national health *service*—financed through higher taxes and controlled by Washington.

To *preclude* such an eventuality, however, the private sector must provide effective *voluntary alternatives,* including cost control alternatives.

And—as an officer of the AMA *and* a practicing physician—concern for the future of our profession prompts me to ask *individual physicians,* too, to demonstrate their sincerity by *restraining the rate of professional fee increases.*

Parenthetically, I believe that asking for such voluntary restraints by physicians is as *reasonable as it is pivotal.*

It is reasonable because of the recent opinion polls which show that a majority of physicians, along with a majority of the general public, agree that the major health care concerns in our society today revolve around the cost issue.

It is reasonable because I am not—I repeat, I am *not*—asking each physician in this country to suddenly make an across-the-board reduction in *specific* fees for *specific* professional services.

We physicians, after all, are not exempt from the

TOM E. NESBITT, M.D., President of the American Medical Association. This is Dr. Nesbitt's inaugural address delivered at the 127th Annual Convention of the AMA in St. Louis, Missouri, June 21, 1978. Dr. Nesbitt is a urologist in Nashville, Tennessee.

hard realities of today's economy. We, too, are subject to higher overhead costs due to factors such as rising prices for heating fuel and medical supplies, employee wage increases and the general inflationary spiral; and these added costs necessitate periodic increases in our professional fees.

What each of us *can* do, however, is place realistic restraints on the *rate* of these periodic escalations, realistic in terms of allowing us to cope with the effects of inflation while maintaining the quality of patient care.

This request is reasonable because it is asking no more of individual physicians than what we are asking of other components of the medical system. If we expect hospitals to reduce their rate of spending increases by two percentage points in each of the next two years, for example, then it is proper for us to demonstrate our own sincerity and good faith by moderating our fee escalation rates.

I should add that for most of us, the resulting financial difference itself would be moderate since it would be merely an extension of an *already existing downward trend* in the rate of professional fee increases.

Evidence of this downward trend is provided by the Consumer Price Index (or CPI) of the U.S. Department of Labor which reveals that the rate of increase in physician fees *has been declining since 1975*.

The CPI *does* show that during the year immediately following the end of federal price controls (between May of 1974 and May of 1975), physician fees increased *13.2* percent. But the "catching up" associated with the end of price controls has substantially moderated since then.

During *1977*, for example, the rate of increase in physician fees was 9.2 percent, or *4* percentage points *less* than the rate for the 12-month period ending in May, 1975.

For purposes of comparison, and using the same time frames, increases in the "all items" component of the CPI dropped from 9.5 to 6.8 percent.

In short, if each physician can moderate annual fee increase rates by just *one percent* in *each of the next two years*, our fee escalation rate would be close to the "all items" rate—perhaps even *under* it if recent all-items price increases continue.

So by merely extending an existing trend, we can provide ourselves with a very visible—and extremely persuasive—argument in our struggle to preserve our pluralistic medical care system, which emphasizes *voluntary* problem-solving by the private sector.

The most formidable challenge by far facing American medicine in the coming months and years will be to deal forcefully with the cost problem which, in the final analysis, means forceful action by each physician.

In that respect, my request for professional fee restraints may be *un*reasonable to the extent that many physicians simply don't know *how* to moderate the costs of medical practice . . . and hence their fees. In this regard, there is a wide variety of possible approaches.

For example, the AMA will sponsor *202* practice management workshops across the nation this year. Offering sound advice on improved efficiency and productivity in medical practice, it is estimated that increased office efficiency alone can reduce practice costs by as much as 5 percent.

Other possible answers have been suggested by the National Commission on the Cost of Medical Care. Certainly their recommendations already have been given considerable attention at this Annual Convention.

Basically, the Commission stresses the importance of participation by individual physicians in local cost moderation efforts, many of which are applicable to the physician's office, as well as to the hospital.

Local peer review and utilization review programs are cases in point. Reasonable guidelines for medical care, based on necessity as well as quality, can help reduce costs. But only if individual physicians participate in, and abide by, the development and dissemination of these guidelines.

Of course, the *real* medical needs of patients must continue to receive the highest priority, whether in the hospital or in our offices.

Nevertheless, rough guidelines for determining the necessity and appropriateness of medical care can serve as a rough yardstick for individual physicians in assessing patient needs before, and after, hospitalization.

Furthermore, *other* segments of our society (notably government and the public-at-large) have to be more responsible in *their* approaches to cost moderation—with the emphasis on "responsible."

Certainly the Carter Administration's proposal to slap a flat, arbitrary limit on hospital revenues would be *ir*responsible.

By contrast, in my view the current Voluntary Effort *is responsible*. While on this subject, one cannot help but speculate as to the motivation, and hypocrisy, behind a recent decision by the Carter-Califano team. I'm referring to their specious decision to *call for voluntary restraints by industry* on the one hand, while attempting to *sabotage* our *own Voluntary Effort* on the other hand, by asking the Justice Department to *not* grant us an exemption from potential anti-trust action.

Apparently, some people in government are determined to ignore *the* irrefutable fact in medicine, namely that we can*not* provide high-quality care to patients for *less* than its basic cost.

Meanwhile, our society must somehow persuade Americans that more healthful lifestyles can do more to reduce medical costs than all other efforts combined. We will take a step in that direction next month at the Joint Conference on Positive Health Strategies developed by the AMA and Senator Kennedy.

It will be my privilege to join the Senator in co-chairing the Conference, which will be held July 25th through the 27th in Washington, D.C.

The Conference itself, co-sponsored by 12 other national organizations broadly representative of our society, will *focus* on positive health strategies for schools, communities and the work place . . . as well as possible health action programs for the future.

But, to me, the Conference also demonstrates that representatives of the private and the public sectors *can* put aside their differences, and in mutual good faith seek practical solutions to real health care problems.

This is in stark contrast to the reprehensible attitude recently displayed by President Carter when he attacked the professions and private institutions, including lawyers, physicians and the AMA.

In a letter of response, the AMA reminded Mr. Carter of this Association's manifold accomplishments in promoting good health and high-quality medical care for the American people. Our response also deplored the questionable logic of impugning the good faith of physicians at a time when mutual action by the public and private sectors are so essential to the resolution of problems.

The White House also was struck by some well-placed editorial shots from the news media. The *Washington Post* took special aim at the President's seeming reluctance to "*let* doctors organize into the AMA." In the lead editorial the *Post* emphasized that, "The verb 'let' has an unwholesome connotation as though the right to organize could be extended or revoked as someone saw fit."

I believe the *Post's* analysis might be extended by reminding Mr. Carter that America is built on democratic principles, with a small "d."

Not the least of these principles is that strong, vigorous private associations serve as a check, and a balance, against the unreasonable growth of government and the unreasonable exercise of power and arrogance often attached thereto.

Therefore, it seems to me that rather than make gratuitous attacks on private sector professions and institutions, the President would be better advised to devote his energies to more constructive pursuits—including the thus-far futile pursuit of his own campaign promises.

But if it's a fight that Mr. Carter wants—then it's a fight he'll get!

Because we physicians are well advised to continue our struggle to avoid the pitfalls inherent in governmentalized medicine. For example, during recent AMA-sponsored trips to study health care systems in Europe and the Far East, these pitfalls truly became apparent.

Any government-enacted and government-dominated health care insurance program inevitably results in significant reductions in the quality—and ultimately the quantity—of medical services available to patients.

And this reduction may have several manifestations such as cutbacks in research, detrimental changes in the curricula and length of training of physicians, and diminished quality in terms of a non-availability of the modern medical technology that Americans have come to take for granted. The upshot of all this would be a reduction—or rationing—in the *quantity* of medical services available to patients.

This is evident in Great Britain; it is dramatically illustrated in the People's Republic of China; and it is currently being confronted as a crucial issue by the Medical Associations of Japan and Australia.

And, of course, it has obvious implications for the "Great Health Care Debate" here in our own country. In all areas, not just in medicine, our society—like other societies—is facing the difficult task of seeking an accommodation between the virtually unlimited wants and needs of individual citizens, and the limited resources—financial and otherwise—available to fulfill those wants and meet those needs.

It should be obvious that every physician shares in the responsibility to help our society make the *right* choices.

Both as individual practitioners, and as a profession made strong through this medical federation of ours, we must help fashion practical, effective answers to problems, with no little emphasis on voluntary answers to cost problems.

I say all this knowing full well that we can be discouraged by the difficulty of reaching a consensus on the right choices even among ourselves, much less a consensus with other segments of our society including government.

The adoption of new policies, after all, often creates disagreement both within and without the profession, as the Delegates at this Annual Meeting can attest.

We can also be discouraged by those critics who insist that this Association is a doddering, debilitated relic of the past. Well, I have a couple of appropriate, closing quotations which offer large measures of reassurance.

The first one pointed out:

> "Doubtless each member of the House has an opinion . . . on each of the various issues which may be considered at this Session of the House.

> It is reasonable to expect these opinions to conflict to some extent when we think of the wide variations in the local problems (of) various communities throughout the country."

That statement was made *40* years ago by Dr. Harrison Shoulders, who was then Speaker of the House, and who subsequently preceded me as an AMA President from Nashville, Tennessee.

The second quotation goes like this:

> "It is no secret that there has been an attempt in various places to lead the American people to believe that the (AMA) is not representative of the American medical profession, that it is a weakened, disrupted, failing organization."

And yes, *that* statement, too, is 40 years old, made in 1938 by Dr. Irvin Abell, then President of the AMA.

For *decades,* then, critics have been greatly exaggerating the death of the AMA; and the *reason* they do so is that to impose their *own* social views on the public, they must first seek to discredit their *strongest* rivals. And this federation of ours is much stronger in 1978 than it was in 1938.

It is stronger in its support for continued rivalry between the public and the private sectors, which is healthy for democracy as a whole.

It is stronger in terms of its pragmatic policies, programs, and proposals to deal with contemporary health care problems.

It is stronger as both protector, and promoter, of American medicine's superb, healing quality in medical education and practice.

And it's squarely up to you, and me, and every physician in this country worth the name to keep it that way!

You have my unqualified pledge to disseminate these truths during the coming year.

Medical Care Costs Keep Climbing

Medical care costs increased nearly 10 percent last year, reports the Health Insurance Institute.

The actual increase in the 1977 Consumer Price Index for all medical care items was 9.6 percent. This was virtually the same as the 1976 increase—9.5 percent—but it was nearly two and a half percentage points less than in 1975.

The recent slackening in health care cost inflation is seen by looking at individual components of medical care. For example, semiprivate hospital room rates rose 11.5 percent last year, in contrast to their rise of 13.8 percent in 1976 and 17.2 percent a year earlier. Physicians' fees last year rose 9.3 percent, two percentage points less than in 1976 and three points less than in 1975.

In the first two months of this year medical care costs increased 4.9 percent over the average for 1977, according to the Consumer Price Index.

CHANGES IN CONSUMER PRICE INDEX
(Changes from preceding year)

Year	*All Medical Care Items*	*Hospital Service Charges**	*Semiprivate Hospital Room Rates*	*Physicians' Fees*	*Dentists' Fees*	*Optometric Fees*
1970	6.3%	—	12.9%	7.5%	5.8%	5.5%
1971	6.5	—	12.2	6.9	6.4	6.0
1972	3.2	—	6.6	3.1	4.2	3.8
1973	3.9	3.5%	4.7	3.3	3.1	3.7
1974	9.3	9.0	10.7	9.2	7.6	7.0
1975	12.0	14.9	17.2	12.3	10.3	7.9
1976	9.5	12.4	13.8	11.3	6.4	6.2
1977	9.6	10.4	11.5	9.3	7.5	5.9

*The index for this component began in January, 1972; comparable data for earlier years are not available. SOURCES: U.S. Department of Labor and Health Insurance Institute.

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Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

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Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

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Karen Ann Quinlan, Human Rights and Wrongful Killing

MARVIN KOHL, PH.D.

Few cases have received publicity and stirred the interest of the general public more than that of Karen Ann Quinlan. The case is unusually complex. Yet several things seem clear: first, Joseph Quinlan asked that the respirator be removed and that his daughter be allowed to die; second, Karen was quoted as saying, on three different occasions, that she never wanted to be kept alive by extraordinary means; third, none of her doctors claimed that Karen was in any technical sense dead; fourth, because there was evidence that she was comatose with irreversible damage to at least one part of her brain, there was neither any immediacy in terms of relieving pain nor a way of having her directly express her own preferences; and finally Judge Muir (in the lower court decision) denied the plaintiff's request, indicating that he did not find grounds for the so-called right to die in the Constitution. He also maintained that "such authorization would be homicide," and that it would be a violation of the right to life, presumably Karen's constitutional right.

This decision was reversed by the Supreme Court of New Jersey. The Court essentially concluded that there is a right of privacy that might permit termination of treatment and that, even if the acceleration of Karen's death were to be regarded as homicide, it would not be unlawful or criminal homicide.

I wish to consider, not the legal question, but what is perhaps the most difficult of the moral ones. Suppose the act of removing Karen Quinlan from the respirator was an actual homicide, and at that, the killing of a person. Would it be a morally wrongful act in the sense of being an injury to Miss Quinlan?

The question is a fundamental one. For if it can be shown that the act of removing Karen from the respirator (hereafter referred to as "the act in question" or simply as "the act") is a wrongful one, then it is not clear just how anyone in essentially similar circumstances has a right to be so treated. An example should serve to illustrate this point. If it is morally wrong to shout "fire" in a crowded theatre that is not on fire, then we cannot argue with any force that one has an actual right to shout fire. On the other hand, if it can be shown that the Quinlan act is not a wrongful one, then whatever the Constitution may not directly say about the right to die, at least we have a way of bringing the latter question to a precise issue. One way of doing so is to appeal to the right of privacy and argue that both common law and the Constitution secure "to each individual the right of determining, ordinarily, to what extent his thoughts, sentiments, and emotions shall be communicated to others" and also secure "the more general right of the individual to be let alone."

Another perhaps more interesting way is to appeal to the 9th Amendment. This amendment tells us that the enumeration of certain rights in the Constitution "shall not be construed to deny or disparage others retained by the people." So that, even if the right to die is not listed as one of the rights in the Constitution, if it can be established in certain carefully specified situations that people have and retain the right to die how, when, and where they choose to, then we have established both the moral and Constitutional grounds for that right. Nor would it be necessary to show that

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the people possess the full right to die. All that would be necessary would be to establish that each individual has a certain negative right, the right not to be forced to live a completely meaningless life, if that state of affairs is irreparable and irreversible.

I shall not argue for the existence of these rights. Although I shall have something to say about the notion of having a meaningful life, I will be content to show that, even if the act in question were an actual homicide, it would not have been a morally wrongful one because it would not have been an injury to Miss Quinlan.

II

Concerning the question of possible killing, one can argue (as Joseph Quinlan has) that removing Karen from the respirator would not be an act of killing but merely an act which would allow her to die with some semblance of dignity. Or in somewhat different language, one can say that the act in question permits death to occur but does not cause death. The difficulty here is as follows: Is there not a difference, a significant conceptual difference, between allowing nature to take its course by doing nothing and, so to speak, expediting the course of nature? If I pass a drowning man and do nothing, it may perhaps be said that I merely allowed him to drown. But can we make exactly the same judgment when I pass a non-swimmer and remove his life preserver?

It is one thing not to place a patient on the machine and another to remove the machine. Not placing a person on a machine is roughly analogous to not throwing a drowning person a life preserver. But the removal of the patient from it seems to be sufficiently like that of removing the life preserver to warrant our saying that it is an act of killing.

Notice that I am not denying the general validity of the distinction between "allowing to die" and "killing." Nor am I denying that clear-cut cases of each exist. What I wish to suggest is that there is another class of acts, acts which expedite the course of nature, and that within this class some are rightfully called acts of killing and some are not. Few of us would say that giving another cigarette to a normal smoker is an act of killing, though it may indeed be expediting a certain course of nature. But almost no one would probably want to deny that turning off a heart pacer of someone who vitally needs one is expediting the course of nature and is an act of killing. What is unclear is how, in respect to killing *qua* killing, this case or the one of removing the life preserver differs significantly from that of the Quinlan case.

Another way of denying that the act in question is the wrongful killing of a person is to deny that Karen Quinlan is, in fact, a person. There are a variety of definitions of personhood, ranging from being a member of the biological species *homo sapiens* to being a person only if the organism is a self-actualized human being. I do not consider these extreme characterizations worthy of serious attention for three reasons. First, in the former, all human beings become persons while, given some standard interpretations of the latter, almost no human would be a person. Second, if the term 'person' is defined so that it is perfectly synonymous with 'human,' then it becomes a needless redundancy. And finally, to insist that an individual is a person only if he or she is a self-actualized human being seems to confuse personhood with being a self-fulfilled or excellent person.

One of the more helpful ways of remedying this situation is to follow a suggestion made by Eike-Henner Kluge. Professor Kluge maintains that "a person is an entity that is a rational being." He then adds that the concept of a rational being "is tied not to actual behavior, but to inherent and constitutive potential," and that "all and only these entities are rational beings whose neurological activity or relevant analogue thereof has a mathematically analyzable structure that is at least as complex as that of a human being, or whose brain or relevant analogue thereof has a structural and functional similarity to that of a human being, particularly with respect to those substructures that are the relevant analogues of the non-limbic cortex." This analysis has the merit of telling us that an examination of behavior in terms of mere body movement is not a sufficient criterion, that we have to determine whether or not certain physical correlates exist, and that when individuals permanently lack the relevant analogues of the non-limbic cortex, they are not persons. What the analysis, however, fails to tell us, aside presumably from the criterion of brain death or being born with no cerebral hemisphere at all, is what it means to lack the relevant analogues of the non-limbic cortex.

There is consensus that Karen is not brain dead. It is generally agreed that she is in "a chronic persistent vegetative state," that she is comatose with irreversible damage to at least one part of her brain, probably a lesion in the high brain stem. But some have taken this to imply that since an individual lacking the capability of conceptualizing a continuing self and having other mental states is not a person because he or she lacks the neurological analogue that makes those things possible, and since Miss Quinlan lacks that analogue, it follows that she is not a person. If this is so, then to the extent that we may be killing, we are not ending the life of a person.

I do not find this argument convincing. My hesitation begins with the use of a definition of 'person' that purports to resolve a moral issue without reference to acts of preference and decision. It increases when we consider the medical testimony and realize that there is an important difference between knowing that Karen no longer functions as a person and knowing that she no longer is a person. The former may be granted; the latter, however, is dubious. The type of definition of 'person' we appear to be using is being made to do more than it is really capable of doing. Strictly speaking, it cannot tell us or help us find out whether Miss Quinlan is a person or not. Miss Quinlan is neither brain dead nor apparently lacking a cerebral hemisphere, as say an anencephalic child would. Further, tests that would confirm the extent of injury (pneumocephalogram or computerized tomography) were not performed so that inferences as to the extent of injury are largely based on other cases and the principle of induction. Finally, it should be observed that the principle of induction seems to be of little help in this case. So that even if one argues that the greater the number of cases in which the lack of relevant neurological analogues of this sort has been found associated with cases of Karen's sort, the more probable it is (if no cases of failure of association are known) that this correlation exists, we still would not get very far since all medical parties to the dispute admit that Karen's case has unique features and that these may indeed be relevant. The view to which I find myself driven, in the attempt to avoid these objections, is that there is a difference between knowing Karen no longer *functions* as a person and knowing that she no longer *is* a person, and since only the former appears to be true, I may assume she may still be a person.

III

It is not unusual when approaching the question of wrongful killing to begin by appealing to existing law. Undoubtedly, as Judge Muir noted in the Quinlan case, the intentional taking of another's life regardless of motives is likely to be regarded as sufficient ground for conviction of some form of homicide. But upon reflection, what should we make of this? Does it not suggest that the problem may well reside in an inadequate characterization of 'wrongful killing'? Does not the Quinlan case, as its very heart, suggest that 'wrongful killing' ought not be considered simply as "the intentional taking of another's life?"

Richard Brandt suggests the *prima facie* duty not to kill is perhaps derivative from two more basic duties: (1) not to cause injury and (2) to respect the rational wishes of others, and hence that the duty not to kill simply does not apply where killing is wanted or desired and is not an injury. Thus he writes that "there are two things that are decisive for the morality of terminating a person's life: whether so doing would be an *injury* and whether it conforms to what is known of his preferences. If I am right in all this," he concludes, "then it appears that killing a person is not something that is just prima facie wrong *in itself*; it is wrong roughly only if and because it is an *injury* of someone, or if and because it is contrary to the *known preferences* of someone."

Brandt's analysis in large part provides the grounds for explaining why most of us hold the discontinuance of certain medical procedures in cases like that of the Quinlans not to be wrongful killing. What is probably not as clear as one might like is what constitutes an injury and why the act in question is not or does not constitute an injury. The former question is, however, very difficult, and is differently understood by various thinkers.

In ordinary discourse the term 'injure' is used as a synonym for almost any kind of harmful, hurtful, detrimental act or act of impairment. This in part explains why many thinkers believe killing, or even death itself, is always an injury. They hold harm to be the violation of an individual's interests, and in turn view death always to be a harm. It has been suggested elsewhere that, according to this interpretation of what it means to have an interest, even predominantly helpful acts of killing are harmful in part. The reason being that, even in acts such as beneficent euthanasia, we violate an interest (presumably an extremely weak interest), namely, to remain alive only if one's life could be radically different.

Almost everyone views death as a definite and irreversible kind of impairment. So that if by 'injury' is only meant "impairment," then it is true that the act in question is an injury. But that only means that an act of ending life diminishes the quantity of life which, though true, appears to be tautological and trivial. If, on the other hand, by 'injury' is meant "harm in terms of infliction or the feeling of pain," then it is not true to say all death is an injury. We need not belabor the point that some people do not feel pain when they die or that in normal conditions in modern countries most patients need not suffer pain, especially unbearable pain, when they die.

We have seen that the word 'injury' has acquired, in the course of time, some associations which are apt to be misleading or needlessly problematic. We shall therefore use 'harm' to refer to any violation of interests and use 'injury' only to refer to a very specific kind of violation of interests and use 'injury' only to refer to a very specific kind of violation of interests. We shall say provisionally that we injure a man only when we deny or deprive him of some important or vital need he would prefer to have. In this sense, a man who removes a minor part of a toenail without permission while someone is asleep may or may not be harming him, but it is difficult to see how this could constitute injury. On the other hand, to remove the entire limb would normally constitute an injury unless it was gangrenous.

It will serve to make the point clearer if we first apply it to the heroic struggle of Charles Wertenbaker. His wife, Lael, in *Death of a Man* has written of their last 60 days together of his struggle with cancer, and their decision to end his life when he decided the time had come. In essence, Mr. Wertenbaker, upon learning that he was terminally ill, decided to bear the test of pain and live as full a life as possible as long as it was a meaningful one. In the end he takes his own life in the company of, and assisted by, his wife. I shall not attempt to describe the beauty or the agony of their last moments together, of a wife saying "I love you please die."

We agreed provisionally that we injure a man only when we deny or deprive him of some important or vital needs he would prefer to have. So that our question comes down to the question of what did death deprive Charles Wertenbaker. If Lael's description is accurate, and we have no reason to believe it is not, what made life meaningful to her husband during his last 60 days was his ability to eat, drink, read, listen to music, write, and relate sensitively with his children and wife. However, at the time he took his life he could not do any of these things. He had no control over functions. He could not hear music or even drink tea. Moreover, there was no reasonable possibility that these conditions could be reversed or that he would recover. Now if this is true, and we can discount the fact that he still enjoyed seeing the face of his wife, then where is the injury Mr. Wertenbaker allegedly inflicted upon himself?

We are now in a position to understand why the argument for non-injury in the Quinlan case in a most significant respect is like the Wertenbaker case. For this purpose we will follow a common characterization of meaningful life. In judging a span of life as meaningful, many of us seem to mean first, that during the period in question the individual has some overall dominant goal or goals which gives direction to those parts of his total life pattern and circumstances that he thinks are important; second, that the individual believes there is some genuine possibility that he will attain these goals; third, that the having of the goal or goals is sufficient to thwart chronic depression or melancholy and in more optimistic situations adds a special zest to life. On this view, a span of life becomes devoid of meaning roughly when, or to the extent to which, an individual believes he cannot possess goals or when, if he can and does have goals, they are impossible of being achieved.

It would obviously take us far afield to examine the merits of this point of view, but it may be useful in order to avoid serious misunderstanding to stress several points. Advocates of this view are maintaining neither that everyone talks this way nor that everyone believes life is meaningful in this, or merely in this, sense. They realize that there are different visions of meaningfulness, that many people hold life to be intrinsically valuable, and that others would maintain that life is always meaningful because even the greatest suffering has a role in the fulfillment of God's purpose. Nor are they maintaining that, because a life is no longer worth living, it somehow follows that that life, in part or as a whole, does not have worth, even great worth. This confusion is often perpetrated by those who, because they believe voluntary dying or suicide would repudiate the meaningfulness and worth of their own lives, mistakenly transfer their values to others, and oddly enough then conclude that these persons (usually their critics) are guilty of such repudiations. Finally, and this closely relates to the last point, it is one thing for someone to have a teleological vision of the meaning of life which includes the conviction that suffering is sacred because it confers upon those whom it rends the most intimate resemblance to Christ, and perhaps because of this insists that, given his interests, the ending of his life would be an injury; but is is another to show that where there is a different vision and different major interests that the ending of such a life is, in all circumstances, an injury.

Returning to the cases before us, we may say the following. The judgment of Mr. Wertenbaker to end his life can be interpreted to be approximately synonymous with the judgment that his present mode of existence was almost totally devoid of meaning, was becoming increasingly worse, and that this process was irreparable and irreversible. The judgment of Mr. Quinlan to end, or allow, his daughter's life to end may be similarly interpreted. There are, however, two important differences. Because Mr. Wertenbaker was aware of the fact that it was highly probable that his life was going to change from that of having a meaningful existence to that of having a meaningless one, he explicitly requested to be allowed to take his own life if and when that occurred. Aside from courage, his major problem was that of having to draw a line and to draw it before it was too late for him to help himself. Unlike Mr. Wertenbaker, Miss Quinlan can neither directly state her preference nor take her own life. Yet her present mode of existence is not one in which goals can be met, and therefore, if her condition is irreparable and irreversible, as it seems to be, then to the extent she remains alive she is doomed to a completely meaningless life.

According to Paul Armstrong, the Quinlan's attorney, "Karen's mother, Julia Quinlan, her sister, Mary Ellen, and her friend and confidant, Lori Gaffney, testified that Karen has expressed to each of them that should fate find her in the tragic circumstances which bring her father before this Court, she would elect and request the discontinuance of the futile medical measures presently employed." On this basis and given certain legal precedents, Mr. Armstrong, I submit, correctly concludes that there is evidence "of sufficient probative weight to compel the conclusion that she would elect to remove the futile measures presently being administered to her. . . . " But what if, we may ask, there was no such evidence? What if Miss Quinlan was much younger and/or had never stated such a preference? Would we then be willing to say that to remove her from the respirator is to injure her? I think not. Of course in doing so we are tacitly making an additional claim. The assumption or claim is that while a rational man might prefer a predominantly meaningless existence over death, he would not prefer to live a completely meaningless life. This, I believe, is not being advanced as an *a priori* truth. The claim appears to be an empirical one, namely, that as a matter of fact it is highly improbable that a fully informed man would choose to live a completely meaningless life in the sense in which that is here understood. If this claim is warranted and the above account correct, then not only is the act in question not wrongful to Miss Quinlan because it is not an injury to her, but it would seem to follow more generally that we do not injure human beings when we allow their lives to end or put them to death even if they cannot, or have failed to, state their preferences if they are living a completely meaningless life, if the state of affairs that warrants that judgment is irreparable and irreversible, and if there is no or insufficient evidence to indicate they would not accept the judgment that their lives were meaningless.

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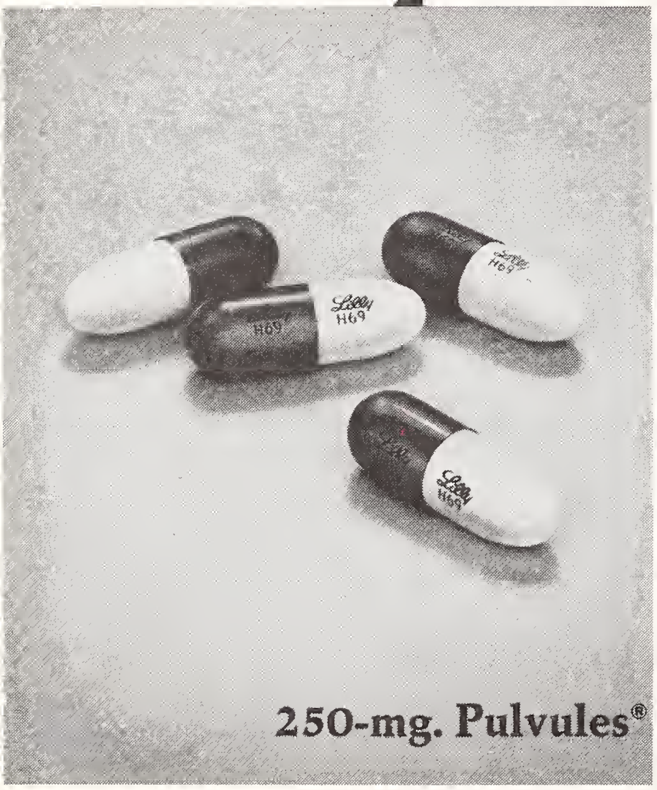

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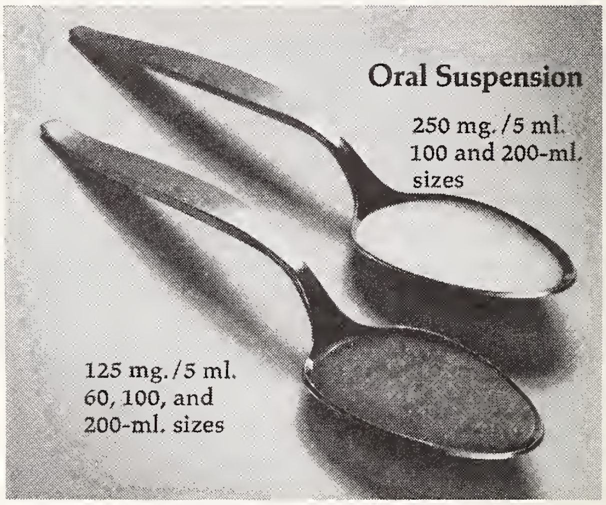

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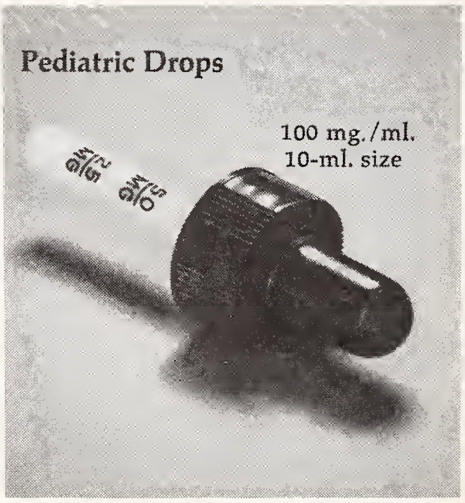

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Connecticut State Medical Society Professional Liability Insurance Program

Seventh Annual Report

August, 1978

AETNA LIFE & CASUALTY

ABSTRACT—Highlights of this seventh annual report include:

- **Dividends: The dividend formula has been changed to permit faster payback of excess premium collected for the past two account years. Therefore a total of $2,694,812 in loss and expense savings will be refunded with interest to members in the program as of the 1976-1977 account year.**
- **Premiums: Total Premium revenue from CSMS members will increase by 14.2%, as a result of premium increases as listed below, offset somewhat by the reductions which follow. The increase is due to sharply increased severity trends.**
- **Surcharges: The 5% surcharge on partnerships and corporations, together with the 25% surcharge on employed physicians is eliminated altogether.**
- **Rate Class Reductions: Electroshock therapy is reduced from Class III to II. Liver and kidney biopsy procedures are reduced from Class II to Class I.**
- **Flexibility: $1,000,000 SCOPE excess coverage option, and new Defendant's Reimbursement coverage option.**
- **Payment: A new payment plan for monthly or quarterly payments of premiums at 0.5% per month on outstanding balance, with option for early payup.**

1978 - 1979 COST SUMMARY

**Class*	*1977 Premium*	*1978 Premium*	*Dividend*	*1978 Net Cost*	*Change In Net Cost 1977 to 1978*
I	$1023	$1220	$ 208	$1012	-1.1%
II	1714	2050	374	1676	-2.2
III	3239	3733	756	2977	-8.1
IV	4173	4817	1007	3810	-8.7
V	5189	5989	1258	4731	-8.8
VI	6203	7160	1509	5651	-8.9
VIII	8231	9503	2011	7492	-9.0

***Class I & II: $1,100,000/1,300,000**
Class III & VIII: $1,250,000/1,500,000
Includes Premises Liability and Personal Excess (SCOPE)

MARKETING - UNDERWRITING

As of May, 1978, 4055 members of the Connecticut State Medical Society were enrolled in the CSMS Professional Liability Program—an increase of 86 during the past year. This represents 88% of the eligible membership.

Below are significant accomplishments that would not have been possible without the cooperation of the Connecticut State Medical Society:

1. Stabilized for physicians and surgeons the Professional Liability insurance market in Connecticut.
2. Maintained Professional Liability premiums at one of the lowest levels in the country.
3. Paid more than $187,000 in dividends.*
4. Minimized cancellation and nonrenewal activity. Under the terms of the CSMS Program,

*"Dividends" in this program are not earnings, but refunds with interest of excess premium collected for an earlier account year. This is a reflection of the "Cost-Plus" feature of the CSMS program.

anyone who is denied coverage is fully advised of his rights relative to a hearing before your committee. Seven members have requested such hearings. In four cases the Aetna's position was sustained. In three cases the Aetna agreed to the recommendation of the Committee to continue the doctors in the CSMS Program.

5. Agreed to continue CSMS/Aetna Program to October 1, 1981.
6. Enlarged the rating classification plan for physicians and surgeons from 18 general classifications to more than 100 specific classifications. This enlargement will improve experience statistics, which will be of assistance for loss control and education purposes, and the premium for the program will be charged more equitably among the members.
7. Continued to offer high limits of coverage (over $5,000,000) to each member at a reasonable cost.
8. Reduced "partnership" charge to 5% of premium.

Program Changes for 1978-1979

Partnership/Corporations

Professional Liability coverage for partnerships/corporations and for individual members of a partnership for the acts of another partner currently has a premium charge of 5% and a separate set of limits. The premium charge will be eliminated as will the separate set of limits of liability for the partnership. Each member of the partnership will continue to have a separate set of limits which includes the partnership/corporation coverage.

Employed Physicians

The charge on an employer's policy for an employed physician will be eliminated when the Aetna writes individual coverage for the employed physician.

Shock Therapy and Needle Biopsy

Review of experience and discussion with medical personnel indicate a need to change current classifications. Shock therapy will be rated Class II (currently Class III) and Liver and Kidney biopsy procedures will be rated Class I (currently Class II).

SCOPE

Since 1971 the CSMS/Aetna Program coverage has been based on a package concept that includes $1,000,000 Excess Coverage (SCOPE). Recently, a few of our insureds have requested that the Program be more flexible with regard to the automatic inclusion of SCOPE.

The Aetna still believes that CSMS members should have the protection afforded by the SCOPE coverage, but in order to respond to the requirements of some doctors the purchase of SCOPE will become optional.

LOSS CONTROL AND EDUCATION

Because of the surge of malpractice claim activity in the early and mid-1970's, we have witnessed the willingness of the Society membership to face up to a growing concern of health care consumers about certain shortcomings in the quality of care and in doctor/patient relationships. The present market availability of insurance coverage, at favorable rates, reflects the success of an effort to reduce the frequency and severity of claims through a joint loss control and education program. Responsible analysts within the Society and Aetna view this facet of the program as the essential ingredient to reversing the malpractice claim trends.

Claim Activity

In the 1977 annual report we reported that there had been 920 arising claims since the inception of the program. During the past year the cumulative number of claims increased by 231 to 1151 (as of July, 1978). The corresponding increase in reserves during the past year on reported losses is $5,294,358.

As of	*Number of Arising Claims*	*Cumulative Number of Arising Claims*
7/72	20	20
7/73	81	101
7/74	132	233
7/75	187	420
7/76	249	669
7/77	251	920
7/78	231	1151

The following indicates the number of claims in suit:

As of	*Number of Suits Pending*	*Numerical Increase*
6/76	176	
6/77	276	100
6/78	317	41

The lower rate of increase from 1977 to 1978 reflects an increased awareness on the part of CSMS members of the causes and prevention of professional liability claims.

However, the marked escalation of the total dollar amount reserved for outstanding claim cases during the past year is a reflection of the increased severity of newly arising claims as well as the effects of inflation on all outstanding claims.

District Claim Review Panels

The Claim Review Panels continue to represent the most effective component of the loss control and education program. To date, 225 cases have been reviewed by the four panels. The votes of more than 500 Society members who have agreed to participate are consistent with the belief that approximately 50% of the claims brought against physicians have some merit and should be settled. Aetna's Claim Department statistics indicate 45% of cases reviewed have been disposed of by settlement, trial or withdrawal of action. Presently, 55% of the cases reviewed are pending disposition. The cooperation of the Society membership in this activity has been exemplary and has received national attention.

Educational Activity

Providing the most comprehensive loss control and education program in the nation, the Aetna continues to combine the joint expertise of law and medicine in the area of medical malpractice claims. The loss control and medical sections of Aetna continue to respond to requests for presentations to medical society and allied health professional groups throughout the state and the nation.

It is fair to assume that every CSMS member has had the opportunity to participate in one or more educational sessions.

Legislation

Early responses to the dramatically advertised "Malpractice Crisis" were, in the main, distressing and produced a reaction of semi-hysteria in some states. Lacking much information, and using data which later proved wrong or incomplete, many societies pursued a course of action which concentrated on reducing the liability of a defendant doctor. Much of the action taken resulted in an attempt to provide special protection for physicians which is not available to other classes of citizens—a form of class legislation of dubious constitutionality. The Connecticut State Medical Society wisely chose a legislative package to merely change the imbalance within the law. It succeeded in producing legislation more balanced and constructive.

In the last year CSMS chose only two issues for consideration by the general assembly—the collateral source rule and installment payments. Following public hearings both bills were "boxed" by the judiciary committee. They will be reintroduced in the next session.

The most important gain was the defeat of the unacceptable provisions of the regulation on "informed consent" promulgated by the Public Health Department. The lobbying efforts of the Society and the negotiation of a final draft regulation acceptable to CSMS, CHA and Aetna is due, in large measure, to the staff of CSMS.

Conclusion

Throughout the turbulent 1970's, the CSMS/Aetna program has provided a stable and available professional liability insurance market for Connecticut physicians. Aside from diligent practice, the only preventative measures are simply attention to, and consideration of, the causes and prevention of malpractice. The two, protection and education, are the essence of the Aetna Program sponsored by the Society.

The causes of malpractice are multifold. They all merit concern and remedy, but do not lend themselves to a single solution. The combined efforts of the Society and Aetna personnel on loss control and education have brought about a better understanding of each other's problems. This understanding should have a beneficial effect on the malpractice situation.

ACTUARIAL

Rates have remained stable for participants in the CSMS/Aetna Professional Liability Insurance Program since 1976, a time period when the trends of frequency and severity continued to rise. These trends, while moderating somewhat during the past few years, are being adversely affected by inflationary pressures, causing the average size of claims to increase. As a result, rates for the coming year will be changed.

Rates

Rates for Primary Professional Coverage ($100,000 per claim, $300,000 aggregate for physicians, $250,000/500,000 for surgeons) will increase as will rates for SCOPE (the $1,000,000 coverage above Primary). SCOPE rates have been based on factors developed in 1974; these will be updated to 1975 factors. The current 15% SCOPE discount will be retained.

Exhibit I

PACKAGE PREMIUMS*
CONNECTICUT PHYSICIANS AND SURGEONS

				Effective Date			*% Change 10/1/77 to*
Class	*10/1/71*	*10/1/74*	*10/1/75*	*10/1/76*	*10/1/77*	*10/1/78*	*10/1/78*
I	445	678	913	1021	1023	1220	+19.3
II	716	1148	1579	1754	1714	2050	+19.6
III	1568	2033	2872	3173	3239	3733	+15.3
IV	2059	2678	3800	4192	4173	4817	+15.4
V	2549	3323	4728	5212	5189	5989	+15.4
VI		3967	5656	6231	6203	7160	+15.4
VIII		5258	7511	8270	8231	9503	+15.5

*Includes Primary Professional Liability, SCOPE Personal and Professional, and Premises Liability.

The results of these rate changes on the total package premium are shown on Exhibit I. When the new premiums are combined with the elimination of the surcharge for partnerships and corporations, as well as the employed physician surcharge, revenue from CSMS members will increase 14.2%. However, when the sizeable dividend being returned this year is considered, the net cost to CSMS members will be approximately 9.2% less than last year.

Expenses

The Aetna continues in its efforts to control company expenses. The provision for loss and claims expense in this year's rates is 77.8%. As the 5% for contingency can be used to offset higher than expected losses, 82.8% of the premium is available to pay for losses, loss expense or to be returned as dividends. Of the remaining 17.2%, 2.8% goes for company administrative expenses, 6.5% for agents' commission, 2.9% for premium taxes, and 5% for company profit.

Dividends

A dividend has been declared by the Aetna Board of Directors which recognizes the favorable experience of the last two years. A total of $2,694,812 will be returned to CSMS members. This represents 29.8% of the Account Year 1976 participating premium. Exhibit III, Figure 1 details the calculation of the losses and expense savings by year.

Exhibit II
PROVISIONS FOR LOSS AND EXPENSE

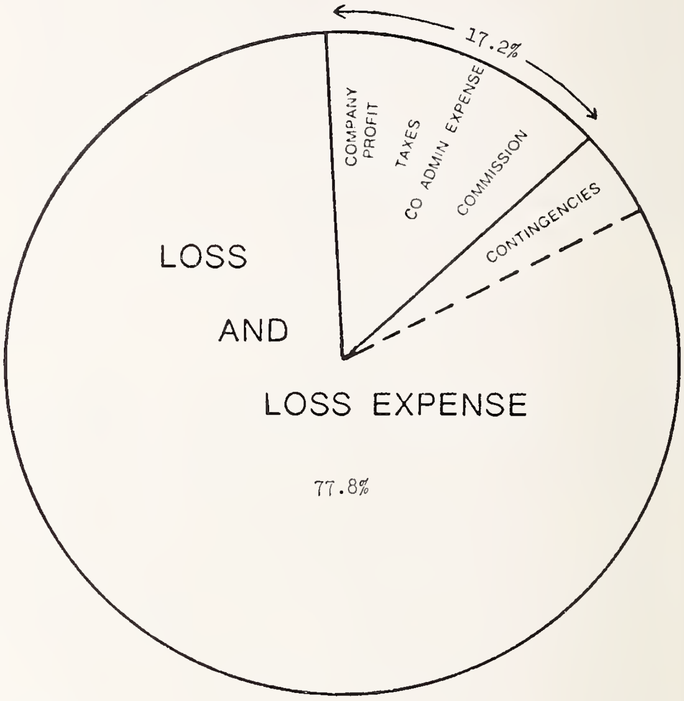


Exhibit III, Figure 1
CONNECTICUT STATE MEDICAL SOCIETY
DIVIDEND CALCULATION

		Account Year						1971-1976
		1971	*1972*	*1973*	*1974*	*1975*	*1976*	*Cumulative*
I. Collected Premium		1,685,832	2,303,432	2,619,569	4,840,838	7,072,784	9,040,054	27,562,509
a. Loss Provision	Dollars	1,097,477	1,499,534	1,713,198	3,112,659	4,873,148	6,608,279	18,904,295
	%	65.1	65.1	65.4	64.3	68.9	73.1	68.6
b. Retention Prov.	Dollars	588,355	803,898	906,371	1,728,179	2,199,636	2,431,775	8,658,214
	%	34.9	34.9	34.6	35.7	31.1	26.9	31.4
II. Loss Costs								
a. Reported	%	74.3	107.5	70.6	50.5	30.7	5.9	38.9
b. Actuarial Reserves	%	6.7	12.7	17.6	20.4	23.7	32.6	23.5
c. Loss Adjustment Expenses	%	7.0	11.2	7.5	5.2	3.8	2.3	4.7
d. Total	%	88.0	131.4	95.6	76.2	58.2	40.8	67.1
	Dollars	1,483,358	3,026,247	2,505,469	3,686,794	4,114,454	3,690,593	18,506,915
III. Retention Costs	Dollars	424,830	587,376	662,750	1,282,822	1,527,721	1,572,970	6,058,469
	%	25.2	25.5	25.3	26.5	21.6	17.4	22.0
IV. Savings								
a. Loss [(Ia)-(IId)]	Dollars	(385,881)	(1,526,713)	(792,271)	(574,135)	758,694	2,917,686	397,380
	%	(22.9)	(66.3)	(30.2)	(11.9)	10.7	32.3	1.4
b. Retention [(Ib)-(III)]	Dollars	163,525	216,522	243,621	445,357	671,915	858,805	2,599,745
	%	9.7	9.4	9.3	9.2	9.5	9.5	9.4
V. Insurance Change		0	0	0	0	0	0	0
VI. Previous Dividend Payments		121,363	66,238	0	0	0	0	187,601
VII. Dividend Due This Statement								2,694,812

Exhibit III, Figures 2-7 are illustrations of the actual loss experience of each Account Year, and portray the development of each over time.

Premium Payment—CABS

Effective with the October, 1978 renewal policies, a new payment plan is available to CSMS members.

CABS is Aetna's new Commercial Account Billing System that allows you to pay for your insurance the way you pay for other goods and services your business needs.

CABS allows you to "pay as you go;" you have the choice of paying your premiums in monthly or quarterly installments. The finance charge is low—.5% per month on the outstanding balance. Or the balance may be prepaid without a finance charge.

CSMS members can secure more information by contacting their Aetna agent.

■ Reported ▨ Unallocated Loss Adjustment Expense ☐ Actuarial Reserve, incl. IBNR

Exhibit III
Figure 2 **CONNECTICUT—ACCOUNT YEAR 1971**

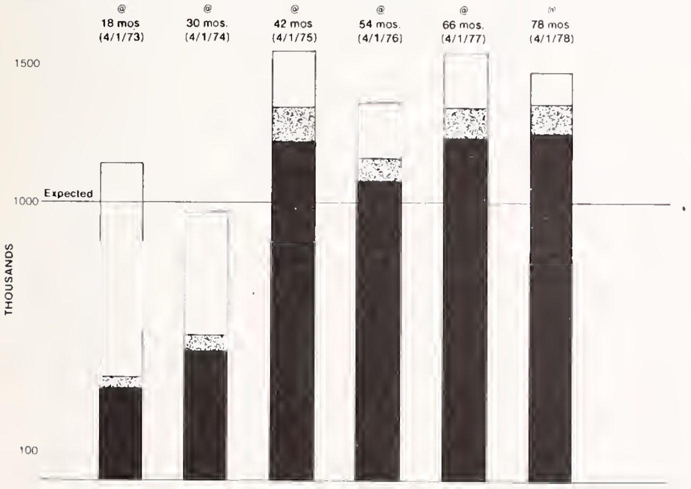


Exhibit III
Figure 3 **CONNECTICUT—ACCOUNT YEAR 1972**

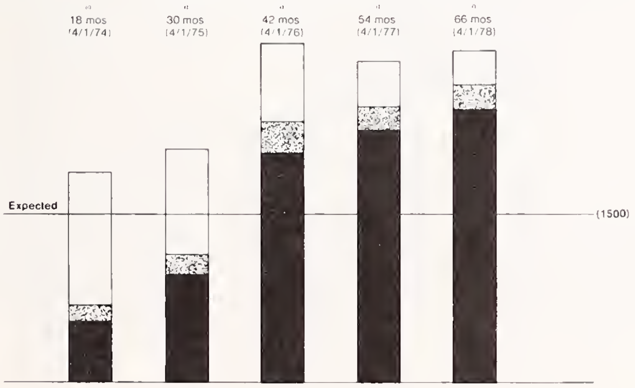


Exhibit III
Figure 4 **CONNECTICUT—ACCOUNT YEAR 1973**

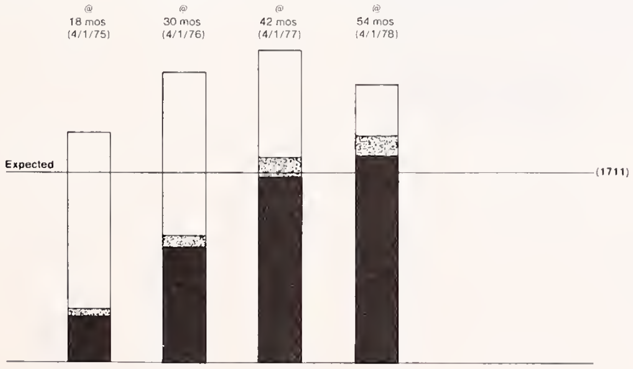


Exhibit III
Figure 5 **CONNECTICUT—ACCOUNT YEAR 1974**

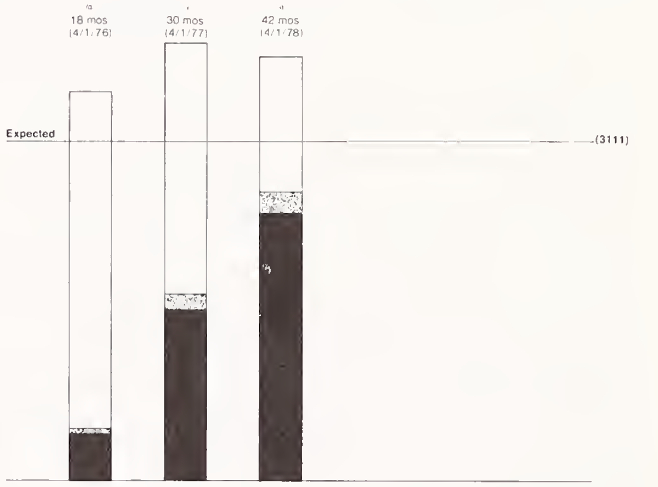


Exhibit III
Figure 6 **CONNECTICUT—ACCOUNT YEAR 1975**

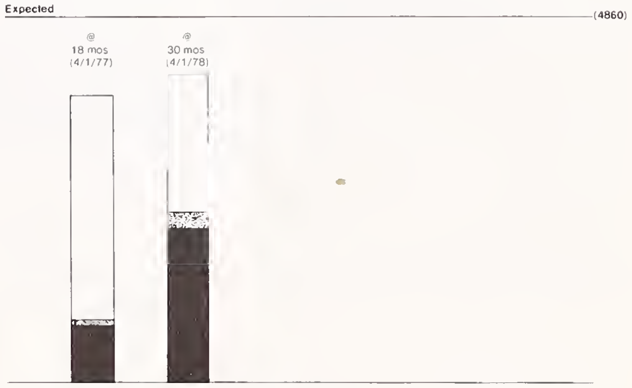
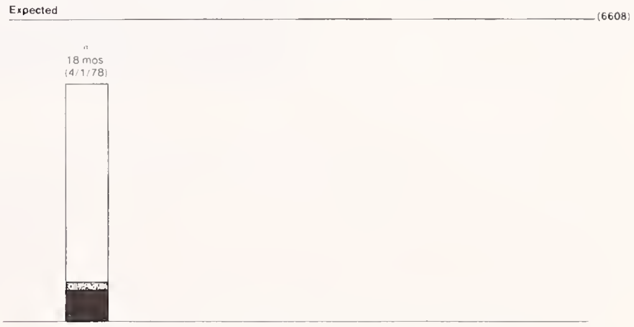


Exhibit III
Figure 7 **CONNECTICUT—ACCOUNT YEAR 1976**



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A Mind That Lost Itself: A Prospective Study of Mental Decompensation from Birth to Breakdown

(Second of Two Parts)

E. JAMES ANTHONY, M.D.

The first half of this presentation I devoted to a retrospective study of the mental decompensation of Virginia Woolf based on biographical material. The following is a clinical account:

The Case of Laura

I have selected the case of Laura, from our HRHV subgroup because I have known her from birth and have monitored her whole development. She is now sixteen years old and belongs to the first family that I began investigating in depth. What was special about her and her two siblings was that their parents were schizophrenic, which placed the genetic expectancy for adult schizophrenia somewhere between 25-30%. To make things worse, the developmental environment provided by the parents was among the most chaotic, disorganized, confused, mystifying and incoherent that I have ever encountered in my total experience of disturbed families.

Laura's family history, observed through four generations, was riddled with schizophrenic psychosis. The maternal great-grandmother died in a state mental hospital, the maternal great-uncle was resident in the same hospital; her mother had received psychiatric care from the age of sixteen and had been consistently diagnosed as undifferentiated schizophrenic. She also had a history of incestuous relationships (unfortunately, common in our peculiar sample) with two of her brothers and an uncle. Even during states of remission, she was grossly pathological and described as promiscuous, untruthful and thieving. She inconsistently battered, abused, neglected, rejected and pampered the three children. During each postpartum phase, she developed strong impulses to kill the infants. Two of the mother's siblings were ambulatory schizophrenics and two others seemed eccentric even for the rural part of Missouri from which they came.

Laura's father, the only child of Orthodox Jewish parents, had been discharged from the army because he was periodically hallucinating and delusional. His mother-in-law, who never minced her words, dismissed him as a "crazy slob." He and his wife had met in a mental hospital and fell instantly in love with each other's delusions. "I thought that she was really a princess in disguise and she showed me a royal birthmark on her thigh." She, for her part, accepted his reincarnation from Moses, since he had been left in a laundry basket outside an elegant house on Fifth Avenue in New York.

The central figure in this developmental drama was the maternal grandmother. To describe her as a matriarch would be to understate her overwhelming impact on the extended family group that she ruled with a rod of iron. She anticipated and prepared for each psychotic breakdown in her family and took over the care of the children. Laura thus became her baby towards the end of the first year. "As long as she stays with me, she will keep well," said the matriarch. "It was when her mother left home that she broke down. My children know where they are when they are with me. When they leave me, they get lost."

Her daughter, Laura's mother, put up a feeble struggle against total submergence and eventually died in the process. In one letter that she wrote her mother from the mental hospital she said: "Instead of helping me or trying to get me home, you have plunged me headlong into a mess. To say the least, I am bitter that you have taken over my children. I know because I am incarcerated in this institution with my husband that you believe us both crazy and that no matter what we did or said, you would still doubt our sanity. Just because we want to live our own lives. I think myself a better person than you because I believe that I could eventually forgive you for what you have done to me but I doubt whether you would ever be able to forgive me for being so imperfect as to become mentally ill."

The matriarch showed me her reply to this tormented letter. She made no reference to the emotions or the accusations but talked factually in terms of financial arrangements, schooling, the price of food, the need to mow the lawn and the dilapidated state of the roof of her house.

There were two things that made me decide to remove Laura immediately from the care of the parents: one was that she was already showing withdrawal symptoms under minimal stress, apathy, disinterest in objects and people and a low autonomic functioning. My second reason was that a psychotic constellation was already being established between mother and infant that I found both alarming and upsetting. Here is an account during a home visit of the feeding situation.

> Mother is feeding Laura who gags and spits up the food. Mother immediately hits her and says, "Don't do that." The feeding gets rougher and ends with the baby being pulled out of the chair with one of her legs still caught in it, screaming with pain. Mother says to her: "What are you trying to do to me? Trying to make me crazy?" She raised the baby to her face and said, with mock grief, "I am sorry, baby, I am sorry." As the baby stopped crying, she abruptly began calling her naughty and bad

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in a loud attacking voice and the baby started to cry again. Once again mother started to laugh, lifted her up and said, almost maliciously, "I am sorry, baby, I am sorry." And once again the baby stopped crying. This cycle was repeated over and over again and offers a striking example of what Winnicott refers to as "tantalizing behavior" in cases of deviant mothering. Such cycles are particularly pathogenic since they create inevitable sequelae of pleasure and pain that the individual finds later difficult to separate.

At this point in Laura's life, the mother disappeared and the grandmother took over with a completeness that soon had Laura shadowing her and looking disconsolate and confused when outside the immediate matriarchal orbit. She would toddle obediently in the wake of her grandmother, looking neither to the left nor to the right and showing little curiosity and exploratory zeal. The matriarch would remark with enormous satisfaction: "She really can't do without me; just try and get her away and you will hear her howl." In watching her eat, I was reminded of a remark of Freud that "when we observe a behavior of a patient, we do not see the trauma he experienced but how he coped with it." The grandmother was still feeding her with a spoon, "because she liked it that way and because it's quicker." Laura was holding the food in her mouth, tucking it away into the corners of her cheeks but without swallowing it. Grandmother would then say: "I know her tricks," and would put her thumb over the toddler's mouth while squeezing her cheeks. Laura would then swallow convulsively, a look of panic appearing in her eyes. Once it was down, the grandmother praised her inordinantly and she beamed happily. Her grandmother remarked: "She's such a funny kid: she both enjoys eating and hates eating. At times you would think I was doing her harm and she looks at me as if I was feeding her poison. But then, at other times, she wants to kiss me everytime I put food into her mouth. What can you say about a child like that?"

At the age of six, Laura came in for her regular follow-up. Her mother had died quite unexpectedly. I tried to explore any element of grief but she dismissed the matter abruptly saying, "My grandmom's my mom. She's the only mom I've got." I said gently that it was sad to lose somebody even when things had not gone too well with them, but she turned her back and said abruptly, "I didn't know her." We talked about school and she said she did not like it and preferred to be at home. I wondered why. "My grandmom wouldn't let anyone do anything to me. She'd see them off." I asked who might want to harm her. "Nobody. It's just a feeling I've got. When I look at people after a while they begin to look bad." I asked whether she felt the same about me and she smiled: "You're quite kind and I don't think that you would want to do anything bad to me."

She suddenly fell silent and looked troubled and I wondered aloud what had frightened her. Did it have something to do with me? For a while she continued to be silent and then she said that it sometimes happened like this even at home. "I begin to feel afraid that something very bad is going to happen and then everything goes far away and looks different and strange. It makes me feel weird." She asked if I could do anything to stop it. I said that we could try and understand what made her afraid and that might help to stop it.

On testing, her rating for vulnerability was still extremely high as well as her score on the prepsychosis checklist. Her level of competence was average and her coping and defense systems appeared to be holding up. I wrote the comment that the underlying psychotic process was showing evidence of minor eruptions and my prediction was that she would struggle through the rest of childhood with some increasing micropsychotic episodes and then, because of her high vulnerability, become a candidate for breakdown in early adult life.

At the age of ten, she asked to see me outside the usual follow-up time. I found her more than usually nervous. Her school achievements over the past few years had been fluctuating but currently she was doing a little less than average work. Her test I.Q. was 110.

I asked her why she had come and she said it was because of school. About a month ago, she had begun to have a difficulty understanding the teacher or sometimes even her friends when they talked to her. "Their words seem to get jumbled up and this makes me very nervous. I don't understand them properly when they speak. Sometimes it's because I get those funny feelings I told you about before and then everything gets mixed up." As she talked, she appeared to be extremely jittery. I told her that listening was sometimes difficult for everyone because they might be thinking of other things or things that made them anxious. I said that I would like to help her to get her thoughts clearer or less frightening if she would allow me to do so. Then, quite suddenly, she said: "Do you think I am going crazy?" This was followed by a traumatic silence on both our parts and I experienced a deep wave of resonance going through me as if something in her was taking place equally in me and was equally dark and confusing. Yet, I did not seem to be able to cope with it and offered instead some surface reassurance. I pointed out that we had tested her very carefully and that so far the tests showed no indication of anything that gave us cause for concern. (I should add that later her Rorschach was given to an independent expert who detected elements of a beginning thought disorder.) I asked her to be sure to keep in touch with me and to call me whenever she felt anxious and this she did from time to time rarely spending more than ten to fifteen minutes on the phone. She said that she liked hearing my thoughts because they made her own thoughts feel better.

For the next two years, she did better in school and her competence and vulnerability scores improved. On the Academic Progress Chart, the developmental curve was now above the average line. She was twelve years old, had started her periods, was well developed and when her face was untroubled, looked quietly beautiful. The matriarch, her grandmother, complained that she was lazy, uncooperative, sloppy and careless about her personal grooming. Occasionally, grandmother felt that she helped herself to money that did not belong to her. Besides, she was mixing with a dubious bunch of girls who were non-church goers and whose mothers looked and behaved like prostitutes. She reminded me that Laura's mother's illness started with the sins of Sodom and Gomorrah. (Incidentally, the matriarch had never discovered about the incest under her own roof when Laura's mother was a child.) There were two reasons why the grandmother had brought Laura to see me outside the usual follow-up period. First, she had overheard Laura tell a friend that she was planning to run away from home because she felt stifled. The grandmother had reminded her of this and warned her that this was what her mother had done and just look what had happened to her. The second and more potent reason had to do with Laura's burgeoning sexuality. Despite her scrupulous monitoring of Laura's every movement, she had found her sitting on a park bench talking with an older boy. A week later, she took the girl to the doctor's for a pregnancy test "just to make sure." "I have to keep her good," she insisted; "Only if she remains good will she remain sane."

In her interview with me, I reminded Laura that she had always affirmed that home was the safest place in the world. She admitted that this was still true although that when she was there sometimes she could scarcely breathe. At times she felt terribly scared of her grandmother, especially when she got angry. "Her face changes and becomes large and horrible, full of lumps and her eyes look like holes and I almost feel that she could kill me." She felt trapped. She could neither leave nor could she stay. I arranged for her to come in once a week and this again seemed to tide her over the crisis. Her trust and confidence in me were still appreciable factors in the episodic therapy. Her schoolwork began improving again and she stopped stealing and, to quote her grandmother, "running after the boys."

At thirteen, going onto fourteen, (one of the peaks of Vygotsky's vulnerability periods) there was a sharp rise on testing in her vulnerability score, a higher rate of precursor symptoms on the prepsychotic checklist, some falling off in academic competence and a marked sense of despondency that seemed at times to verge on hopelessness and despair. There were still no overt signs of psychotic developments and her reality testing, as closely as I could gauge it, remained intact. However, on the basis of the total examination, I revised my earlier prediction and stated that I now felt that a "breakdown" would take place sometime during adolescence. Because of the distance from town, it was difficult for the old lady to bring her up consistently for her sessions with me. In view of this, and in view of the fact that depression seemed to be her main affective disturbance, I placed her on antidepressants. On the phone to me, she remarked pathetically that medicine was no substitute for seeing me because only I knew how to deal with her thoughts and they were always better after she spoke to me. Yet, when placement was suggested in St. Louis, she refused saying that she still felt safest in the world when she was in her little rural community and where she knew everybody.

Toward the end of Laura's fourteenth year, her grandmother wrote to say that the principal had called her with a disturbing piece of news. He said Laura was claiming to be a witch with magical powers that allowed her to put spells on other children. She had told her classmates that her dead mother frequently talked to her and would do anything that she asked her to do. If anyone, on the other hand, tried to hurt Laura, she would see that harm came to them. "I do not feel," the grandmother wrote, "that my daughter's condition, especially that she is now dead, could affect Laura in any way. After all, she was never around her mother except for the first year. Yet, she does seem to be so much like her in many ways and now she seems to be feeling and thinking like her. She also misrepresents facts in the way that her mother did before she became mental. I am very worried about this witch business. My God, Doctor, how can we help this child? She seems to be going the same way as her mother and father and nothing I am able to do can stop it. God bless you for all you have done so far."

When I saw Laura, I was immediately aware of a new distance between us and she looked at me evasively, allusively and mistrustfully. I wondered what had brought about the change. She agreed that she no longer felt as safe and as comfortable as in the past but perhaps that was because she no longer needed me. She was now in touch with her mother. She had recently experienced moments when the whole world seemed to become suddenly clearer as if her mother was opening the skies above her. It made her feel really alive and as if she could do anything. She thought that she was very much like her mother and that there was a closeness between them. She asked me to tell her everything that I knew about her since I was the only one who had known her well. Her grandmother refused to talk about her. "I can get to know her even better through you." I asked her what she wanted to know in particular and she said: "I want to know whether she loved me and whether she went crazy because of me and whether she wanted me and just couldn't get me away from my grandmom. She is my real mom and I want her back." I asked her to tell me how she was feeling inside herself with all these thoughts coming into her head and she said, with a strange remote expression on her face: "If you really knew my mother, you would be knowing exactly how I am now feeling." I realized that the breakdown had occurred. She was now trapped between her schizophrenogenic grandmother and her dead, but physically "alive" schizophrenic mother and there seemed to be no intermediate area left for therapeutic maneuvering. The long dialectical relationship between us that had stood the test of many vicissitudes seemed no longer potent enough to stave off decompensation. My unconscious seemed no longer in touch with hers and the new and powerful figure of the mother now stood between us as an unconscious omnipotent fantasy. We had shared so many experiences together; I had heard so many of her secret fears; I had been with her so often near the brink of reality, but it no longer seemed to be effective enough.

However, therapeutic optimism and enthusiasm are also significant tools in the armamentarium of the therapist. After five or six weeks of depersonalization, "mother talking," withdrawal and admitting to "nothingness," she began to climb back into the relationship with me, to recognize my presence and to renew her confidence in the continuity that I had become in her life. She returned to school and appears to be once again on a stable footing. She calls me only once a month and the contact is no longer thought to thought but person to person. She refers to me as her "friend," no longer as her doctor.

Conclusion

I have tried, in this presentation, to give you two accounts of the subtle thought processes of change that take place over time in the psychology and psychopathology of developing individuals—one account "from within" from Virginia Woolf, and a second account "from without" of Laura. It gives us some indication of what remains to be done if we are to salvage and use the potential that lies unused in so many mental institutions across the country. In a letter to Clifford Beers, William James had this to say: "I have long thought that if I were a millionaire, with money to leave for public purposes, I should endow 'insanity' exclusively." This is the message that I would like every federal, state and private foundation everywhere to keep constantly in mind. In spite of all our advanced technologies, the principles that create health and happiness and maintain health and happiness are still surprisingly simple—undoing chains, opening doors, recognizing human rights and working within a therapeutic alliance; but many of them continue to be overlooked. We are all obligated to keep them constantly in the public mind.

(This is the second of a series of two articles.)

Lifestyle Council
of Connecticut

AMERICAN CANCER SOCIETY
AMERICAN HEART ASSOCIATION
CONNECTICUT LUNG ASSOCIATION
CONNECTICUT STATE DEPT. OF HEALTH
CONNECTICUT BLUE CROSS & BLUE SHIELD

GETTING TOGETHER – JUST FOR THE HEALTH OF IT

For the first time in Connecticut — or anywhere else in the country — five major statewide health organizations are pooling resources in an effort to provide information people can use to improve their "lifestyle."

Under the umbrella name of the Lifestyle Council of Connecticut, the five agencies have launched a multi-media public awareness campaign to draw attention to the four major factors which a person can control to increase chances of living a healthier, longer life.

Emphasis has been placed on poor eating habits, cigarette smoking, lack of proper exercise and failure to check for and control high blood pressure.

Governor Grasso has designated September LIFESTYLE AWARENESS MONTH, and the Council, using the theme "Put A Little Health In Your Life," is making available five action-oriented folders free to anyone requesting them.

In addition, health experts from each of the agencies will appear on radio and TV news and public affairs programs during September and all media have been asked to support the campaign.

At this time we would like to ask your help, too.

Will you be willing to place copies of these folders in your waiting room? The key to the success of the Council's goal is distribution, and you are in a position to give major assistance. Please have someone call or write (see below) requesting folders on Exercise, Nutrition, High Blood Pressure, Smoking and Lifestyle (which touches on all of the foregoing). Thank you.

Request folders from: Blue Cross & Blue Shield of Connecticut
370 Bassett Road
North Haven, CT 06473
Phone: (203) 239-4911, Ext. 400

Changes in Tort Law and Procedure

Introduction

The laws and procedures relating to medical malpractice claims were studied recently by a staff group of the American Bar Association. The group was asked to collect and analyze materials related to recently proposed or enacted changes in tort law and procedure. The staff worked closely with the American Bar Association Commission on Medical Professional Liability, who provided a sounding board and advisory group.*

After 12 months of analysis and debate, the staff submitted their report to the government.[1] Included in the report are 18 recommendations and supporting reasons. Most of the recommendations could have an important impact on medical malpractice claims in the future. Because of their importance in the medical profession, they are reprinted here.

The positions recommended by staff with respect to the selected items, and the reasons for these positions, are as follows:[2]

1. Informed Consent

Recommendations

(a) A cause of action for lack of informed consent should not be treated as an action in battery but rather as an action in negligence, unless the complainant alleges that the physician acted with intent to harm or to deceive the patient.

(b) In obtaining a patient's consent, the physician should disclose those risks which a reasonable physician in the same or a similar locality would disclose; provided that a patient who asks for additional information has a right to be further informed by the physician, and a patient who asks not to be told of risks has a right not to be informed.

(c) Where informed consent is not obtained, the physician should not be liable if a reasonable patient would have undergone the procedure had he been properly informed.

(d) Specific formulae or forms for informing a patient and obtaining his consent should not be included in legislation.

Supporting Reasons

While the traditional basis for liability in an action for lack of informed consent has been battery, it has been increasingly recognized—at least in cases where consent has actually been given or can be implied—that a standard of professional conduct is involved. The staff agrees with this more recent view of the law of informed consent. Therefore, except where the patient did not consent at all to the particular procedure, or where the physician intended to harm or deceive the patient, the patient should be required to show a breach of a standard of disclosure and resulting injury, rather than merely an unconsented-to invasion of his person.

Consistent with the negligence theory of liability, the patient should show that due to the physician's negligent failure to disclose a material risk, an informed consent was not obtained, and that if he had been adequately informed, he would not have undergone the procedure. Even though there is merit in the decisions in a few jurisdictions that the patient should be told everything which he reasonably needs to know in order to make an informed choice,[3] the staff is persuaded that the better test is that the physician ought to disclose those risks ordinarily disclosed under the circumstances by physicians in the same or a similar locality. As to causation, the staff believes that it is not enough for the patient to testify that he would not have undergone the procedure if he had known about a particular material risk. Rather, as is the law in most jurisdictions, the patient should also be required to show, by appropriate testimony (probably involving an expert), that a reasonable patient who had been adequately informed would not have consented to the procedure or treatment.

There is no substitute for a careful review by a physician of the impending treatment or procedure

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EDITOR'S NOTE: Opinions here do not necessarily represent those of the Connecticut State Medical Society.

with his patient. Although the extent of disclosure of risks will vary with reasonable medical practice and the needs and wishes of the patient, the physician should always attempt to communicate with his patient on an individual basis and not rely on consent forms without an opportunity for inquiry by the patient and explanation by the physician. Statutory attempts to give general consent forms legal validity, or to spell out the risks which should be disclosed,[4] are inconsistent with the true needs of patients, as well as physicians' professional responsibilities.

2. Statute of Limitations

Recommendations

(a) An action for medical malpractice should be commenced within two years from the time the incident which gave rise to the action occurred, or within one year from the time the existence of an actionable injury is discovered or in the exercise of reasonable care should have been discovered, whichever is longer. Except for cases involving a foreign object or fraudulent concealment, no action should be brought more than eight years after the occurrence of the incident which gave rise to the injury.

(b) Where a foreign object has been left in the body, a patient should have one year after the object is discovered in which to bring an action.

(c) Where fraudulent concealment of material facts by a health care provider has prevented the discovery of the injury or the alleged negligence, the patient should have one year after discovering that an actionable injury exists in which to bring suit.

(d) The statute of limitations should be tolled during continuous treatment by the same health care provider for the same condition or for complications arising from the original treatment.

(e) The statute of limitations should apply equally to adults and minors alike, except that a minor's representative should have until the minor's eighth birthday to commence a suit, regardless of how many years earlier the cause of action accrued.

Supporting Reasons

Statutes of limitations are designed to prevent the injured person from sleeping on his claim so that witnesses, memories and evidence can be reached while still fresh, so that intervening factors will not have operated to obscure and make the effect of the original actor's tortious conduct difficult to determine, and so that the prospective defendant's fears of being sued can be quieted after a just period of time. Because of the complex nature of medical malpractice cases, which requires that the facts of the incident be ascertained as quickly as possible, and because of the insurance crisis, a relatively short (two year) period of limitations is proposed in order to speed up the claims process. Such a shortened period will still give the patient time in which to decide to bring suit (unless the injury and its cause have not become apparent, in which case the discovery exception will prevent the statutory period from commencing), while it promotes fairness to the defendant and relieves the court of the burden of trying stale claims.

If the general statute of limitations is applied in the situation where the patient does not have a reasonable basis until after the statute has run for concluding that he may have been negligently injured, it will work an unfairness to the patient.

In applying the discovery rule, courts have had difficulty in determining when the cause of action accrues. One view holds that the discovery of an injury by the patient is enough, without more, to trigger the running of the statute. The other view is that before the statute of limitations can begin to run the patient must not only discover his injury but must also be aware of facts which suggest that his injury may have been the result of negligence. The proposed position adopts this second view by requiring the patient to discover the existence of an actionable injury. The fairness of this position is supported by numerous cases in which medical injuries have manifested themselves through vague symptoms long before their connection with negligent treatment could possibly have been discovered. In many cases of surgical malpractice, for example, a later exploratory operation in which the negligent mistakes of the first surgical procedure are discovered is performed only after years of patient complaints of pain and discomfort.

However, since the statute of limitations is also a device for giving prospective defendants respite from suits after enough time has gone by, it seems fair to include an absolute limitation, subject to certain exceptions, of eight years from the occurrence of the incident. Where fraudulent concealment has prevented the patient's discovery of the negligence, or where a foreign object, which is evidence in itself of negligence, is found, the equities are such that the defendant should not be given the benefit of an absolute cutoff of his own liability. Other cases of misdiagnosis and mistreatment, though, do not have similar compelling reasons for an open-ended discovery rule. The medical procedures used in many cases may have changed dramatically over time, making it increasingly difficult to determine the relevant standard of care against which to measure the alleged malpractice. In addition, unlike the foreign object situation where the instrumentality causing the harm retains its identity in the body and is itself probative of negligence, there will often be no clear evidence of improper treatment and no clear evidence, given the intervening years, of the proximate cause of the injury. Therefore, in those cases not involving a foreign object or fraudulent concealment, principles of fairness to the defendant justify bringing his liability to an end after a reasonable period of time.

A continuous treatment tolling provision is important in that it encourages a patient to seek recourse first through remedial care rather than through the courts. It also prevents the physician from possibly escaping liability by extending treatment beyond the period of limitation, and it obviates the need to determine the point at which, during a course of treatment, the negligence occurred which resulted in injury. Routine follow-up visits and examinations undertaken at the request of the patient for the sole purpose of ascertaining his condition should not be considered to be "treatment" for this purpose.

The staff has concluded that minors' representatives should be able to bring an action until the minor's eighth birthday, even though the injury occurred long enough before that date that the general statute of limitations would have precluded an action. In so recommending, the staff has reached what it considers to be a reasonable compromise between the needs of injured minors and those of potential defendants and insurers. Below a certain age, the child may not realize that something is wrong or may be unable to communicate his complaint adequately. Moreover, since a young child is developing rapidly during his early years, many injuries are difficult to detect and evaluate. However, there is also legitimacy in the argument of many physicians and insurers that a rule which protects a minor until he reaches adulthood is unfair, since facts become stale, medical standards change and the risk of actions many years in the future cannot be predicted by actuaries. The argument is also made that the law relies on a minor's parents or other legal representative to protect his rights in many other contexts, and that there is no reason not to do so in the medical malpractice situation.

It seems fair, therefore, that there should be a minimum age until which a minor's representative may sue, even though the general statute of limitations would have expired. As a practical matter, injuries occurring from birth until the minor's sixth birthday could be the subject of a suit up until the minor's eighth birthday, assuming a general statute of two years.

3. Locality Rule

Recommendations

(a) A physician who presents himself to the public as a specialist (whether or not certified in that specialty), should be judged by national standards applicable to that specialty. A general practitioner or a family practice specialist (even though certified as such) should be judged by the standards of such physicians in the same or a similar locality.

(b) To be competent to testify for or against a defendant, a person should be a physician who is actively practicing in the same field or specialty as the defendant or in a field or specialty which is closely related to that of the defendant.

Supporting Reasons

In adopting this statement, the staff is endorsing the view taken in several recent cases that improvements in medical education, communications and transportation, together with advances in defining appropriate training and roles have rendered the locality rule obsolete as applied to defined medical specialties.[5]

However, where a general practitioner[6] is involved, the staff is in favor of using the "same or similar locality" standard. Many general practitioners live in rural areas and small towns and do not have an opportunity to attend continuing medical education seminars or compare notes with a variety of colleagues. Moreover, certification requirements and practice standards for general practitioners are not as defined as for other primary and surgical care specialties. Under these circumstances, the staff believes that it would not be fair to hold a general practitioner to national standards. However, if general practice develops further as a defined specialty and medical practice becomes more group oriented, the time will come when the locality rule no longer makes sense for general practitioners.

Under any general standard of care, a physician ought to exercise reasonable care and judgment in deciding whether he is competent to diagnose the patient's illness or to perform the medical procedures apparently required by the patient.[7] Whether the physician has a duty to refer to another obviously will depend in part on what his referral options are and whether the patient's condition is such that emergency care is indicated.

The staff also recognizes that with respect to specialists, the locality rule will have a continuing life of sorts, in that the appropriate specialty standards will be applied in the light of the specific circumstances, including the facilities and equipment available to the physician.

If the proper reference for standard of care purposes is the same specialty as the defendant physician, it follows that those who testify for or against him ought to be physicians who are, in a general sense, his peers. However, as a specialty board certification is not a legal prerequisite to practicing as a specialist, this recommendation would not necessarily preclude a person who has assumed the role of a specialist and has gained experience—although not formal credentials—in the specialty from testifying against a defendant specialist. Moreover, since the activities of a specialist often overlap with the activities of physicians in one or more related specialties, the standard is broad enough to permit cross-testifying among related specialties to the extent their work and expertise overlap.

In addition, in order to assure that the necessary clinical perspective is present, and that the abuses caused by those who do little else but testify in malpractice cases are curbed, the staff recommends that only active clinicians in the applicable specialty be allowed to testify.

4. Ceilings on Awards

Recommendation

No dollar limit on recoverable damages should be enacted which can operate to deny a plaintiff in a medical malpractice action full compensation for economic losses. The staff has taken no position with respect to a ceiling on non-economic losses.

Supporting Reasons

When liability has been demonstrated, the first priority of the tort system is to compensate the injured party for the economic loss he has suffered. While it is legitimate in the staff's view to deduct payments to or for the benefit of the plaintiff by collateral sources, it is unconscionable to preclude a plaintiff, by an arbitrary ceiling on recovery, from recovering all his economic damages, even though some lowering of medical malpractice premiums might result from the enactment of such a ceiling.

While non-economic damages (pain and suffering, disability, disfigurement) are as real as economic loss to the plaintiff, they are much more difficult to measure in monetary terms and do not involve the reimbursement of dollars expended by the plaintiff. The staff, therefore, feels that it should not set forth a general recommendation approving or precluding a ceiling on non-economic damages. Whether such a ceiling is appropriate will depend on a demonstrated need in the particular jurisdiction to contain jury awards and settlements within realistic limits in order to assure the availability of insurance at costs which do not disrupt the delivery of health care services. Since a ceiling of the type enacted in several jurisdictions would preclude the non-economic damages, legislators should be cognizant of the fact that some courts have voided ceilings provisions on equal protection grounds (see pages 66-67, *infra*).

5. Collateral Source Rule

Recommendation

Recovery of damages should be reduced by collateral source payments received by the plaintiff as the result of government, employment-related, individually-purchased and gratuitously-conferred benefits. The amounts to be set off should be deduced by the judge from the jury's assessment of damages against the defendant. Subrogation should not be allowed to any collateral source for medical benefits thus set off.

Supporting Reasons

Traditionally, the tort law sanctioned a partial or total double recovery by an injured plaintiff by refusing to reduce a liability judgment by the amounts the plaintiff has received from collateral insurers. This result is grounded on the notion that it is better to allow some overlapping of payments to the innocent plaintiff than to allow the wrongdoer to benefit by the plaintiff's collateral protection.

The staff does not agree that a plaintiff should retain collateral payments and receive full compensation from the defendant in a medical malpractice action.

The idea of a windfall runs counter to the basic aim of the tort law, which is to make the plaintiff whole, not to over-compensate him. The extent to which the defendant must respond in damages is better measured by the plaintiff's harm than by the degree of the defendant's fault. However, even if "fault" is an appropriate basis for refusing to permit the defendant to lessen his liability, it is a very rough and unfair basis upon which to punish defendants whose culpability in the moral sense may run from almost nil to severe. Finally, the notion of a wrongdoing defendant is increasingly anachronistic in this age of widespread malpractice insurance and growing sources of compensation for injured patients. In this context, the aim should be to assure the plaintiff fair compensation from available sources, but no more.

The argument for allowing the plaintiff to retain collateral benefits and receive full tort compensation is strongest where the plaintiff has purchased an individual health insurance or disability policy. Yet, even here, the argument for overcompensation is not persuasive. One does not purchase accident insurance in the hope of a double recovery. (This is evidenced by the fact that the purchaser is almost never aware whether or not the collateral insurer has retained a subrogation right.) Rather, one is paying for the security of prompt and guaranteed payments in the event of loss, regardless of whether one's injury or illness is due to anyone's fault or whether one is likely to recover damages by pursuing litigation. In receiving payment from an accident or health insurer, the injured or ill person receives exactly what he bargained for, and there is no reason why a defendant should duplicate the plaintiff's recovery from this source.

As indicated in the text of the recommendation, the staff believes that a wide spectrum of collateral payments to or for the benefit of the plaintiff should be set off. Even benefits from term life insurance should be defined as a collateral source for this purpose, since term insurance, unlike policies with an investment aspect, are purchased to provide against a contingency which may or may not occur during the term of the policy.

Assuming that the collateral source rule is repealed, the next question is whether collateral insurers which have made payments to the plaintiff should be entitled to be made whole through subrogation. The staff recognizes that subrogation rights vary from jurisdiction to jurisdiction, and that collateral insurers have different policies with respect to enforcing contractual or statutory indemnification and subrogation rights. However, collateral insurers are generally more efficient than liability insurers in making a higher percentage of premium dollars available to claimants, and since shifting losses from the former to the latter source costs money, the staff has concluded that there is a strong argument for denying subrogation. In effect, denying subrogation would tend to make the more efficient, high volume accident and health insurers the *primary* insurers for malpractice losses and the liability insurers the *secondary* or excess layer insurers.

The set-off of collateral source payments should be mandated as a matter of law rather than left to the jury's discretion. Moreover, legislation should require that the trial judge deduct all collateral source payments from the jury's award before entering judgment. The jury would be instructed to resolve any dispute as to the amount of a collateral source payment.

6. Periodic Payments

Recommendation

Legislation should be enacted in all states to permit the payment of future damages in periodic installments.

Supporting Reasons

In most states, the trier of fact can only return a lump-sum award. Thus, the present value of all future loss must be estimated on the basis of the plaintiff's life expectancy or the expected period of disability. If a judgment is for periodic payments, however, the installments will be paid over the plaintiff's *actual* lifetime or period of disability—no more and no less. In this way, there can be no windfall to the beneficiaries of a plaintiff who dies sooner than expected, and installments will always be available for their intended purpose. Moreover, arrangements are possible under which a periodic payments judgment can be funded by the insurer with reasonable security to the plaintiff, and yet at a significantly lower cost to the insurer than an equivalent lump-sum payment.

Periodic payments judgments constitute a generally sensible and flexible way of compensating those whose disabilities are long-term and substantial. Appropriate enabling legislation should be enacted in those states which do not now permit such judgments.

7. Contingent Fees

Recommendation

A decreasing maximum schedule for contingent fees should be set by court order, provided that such schedule should not be so restrictive, particularly with respect to small to moderate recoveries, that it hampers the ability of injured patients to obtain legal representation.

Supporting Reasons

The contingent fee system should be retained, since at present it is the only means by which all except well-to-do patients can afford legal representation in medical malpractice cases. In addition, it acts as a check on frivolous actions by encouraging lawyers to screen out cases which have little or no chance of success. However, in order to relate the attorney's fee more to the amount of legal work and expense involved in handling a case and less to the fortuity of the plaintiff's economic status and degree of injury, a decreasing maximum schedule of attorney's fees, reasonably generous in the lower recovery ranges and thus unlikely to deny potential plaintiffs access to legal representation, should be set on a state-by-state basis. Because the regulation of legal practice is regarded almost universally as the responsibility of the judicial branch of government, it is preferable that any regulation of contingent fees be accomplished by court order rather than legislative enactment.

8. Ad Damnum Clauses

Recommendation

Except for allegations necessary to establish jurisdictional limits, a plaintiff's pleadings should not be permitted to allege a total dollar amount claimed; provided, that the defendant has a reasonable way of ascertaining the amount the plaintiff is claiming as damages.

Supporting Reasons

Except where a general allegation of an amount claimed is necessary to establish a court's jurisdiction (i.e., "over $________"), the inclusion of a specific dollar amount claimed serves no useful purpose in medical malpractice litigation. In addition, as the *ad damnum* amount is often an inflated guess at the plaintiff's damages, particularly in a serious case, there is a risk that the statement of an *ad damnum* amount will create inflammatory publicity and decrease the likelihood of a settlement. If the *ad damnum* clause is eliminated, however, a defendant should be afforded a reasonable opportunity to ascertain what the plaintiff is actually claiming.

9. Guarantees of results

Recommendation

A health care provider should not be held liable for promising a particular outcome unless such guarantee is in writing and signed by the party to be charged.

Supporting Reasons

The risks of abuse in allowing patients to allege oral guarantees of results outweigh the benefits of recovery in those instances where such a guarantee can legitimately be claimed and proved. Where an action on an oral guarantee is allowed, it is very difficult for the trier of fact to ascertain exactly what result was guaranteed, or whether any result at all was guaranteed, and the issue must be resolved by choosing between the conflicting versions of the plaintiff and the defendant. Even where liability is properly denied, the defendant doctor is subjected to the inconvenience and embarrassment of a suit which may be based on a misinterpretation of the doctor's attempt to explain a procedure or to encourage or reassure the patient.

10. Res ipsa loquitur

Recommendation

The staff approves for the most part the position adopted by the American Medical Association in its Model Res Ipsa Loquitur Law (quoted in Supporting Reasons, *infra*), with the qualification that the staff does not necessarily regard the enumeration of *res ipsa loquitur* situations therein as an exhaustive list.

Supporting Reasons

Some courts have misapplied the doctrine in cases where the evidence shows only that a bad result occurred rather than a bad result which was more likely than not to have been caused by negligent conduct. Nevertheless, there are situations in which common sense indicates—even to a person without medical training—that the injury was not likely to have occurred without some negligence on the part of the person in control of the instrumentality or activity which caused the injury. An example is the leaving of a foreign object in a patient's body. In such a case, there seems to be little gain in requiring the plaintiff to produce an expert witness in order to place his case before the jury. The staff endorses for the most part the use of the American Medical Association's Model Res Ipsa Loquitur Law as a guide to the kinds of injuries to which the doctrine can appropriately be applied, but it opposes the restriction of the doctrine by statute only to such injuries, since there may well be other injuries and situations to which the doctrine can be legitimately applied. The AMA Model Res Ipsa Loquitur Law is as follows (showing the staff's suggested changes by parentheses and underscoring).

No liability for personal injury or death shall be imposed against any provider of medical care based on alleged negligence in the performance of such care unless expert medical testimony is presented as to the alleged deviation from the accepted standard of care in the specific circumstances of the case and as to the causation of the alleged personal injury or death, except that such expert medical testimony shall not be required and a (rebuttable) *permissible* inference that the personal injury or death was caused by negligence shall arise where evidence is presented that the personal injury or death occurred in any one or more of the following circumstances; (1) A foreign (substance) *object* other than medication or a prosthetic device was unintentionally left within the body of a patient following surgery, (2) an explosion or fire originating in a substance used in treatment occurred in the course of treatment, (3) an unintended burn caused by heat, radiation, or chemicals was suffered in the course of medical care, ((4) an injury was suffered during the course of treatment to a part of the body not directly involved in such treatment or proximate thereto,) or (5) a surgical procedure was performed on the wrong patient or the wrong organ, limb or part of a patient's body.

11. Itemized verdicts

Recommendation

Jurisdictions which do not permit a special verdict or a general verdict with interrogatories should enact legislation patterned on Rule 49(a) and (b) of the Federal Rules of Civil Procedure in order to permit such verdicts in the discretion of the trial judge.

Supporting Reasons

Many times there are circumstances in which it is wise for the trial judge to inquire into the basis for a general verdict through interrogatories, or even occasionally to ask for a special verdict in which the jury is instructed to find on particular questions of fact or categories of damages. It is often particularly important in serious, complicated medical malpractice cases to ascertain the amount awarded for particular elements of the plaintiff's past and future loss. However, since circumstances will vary from case to case, it would seem appropriate to leave the use of interrogatories or a special verdict in the sound discretion of the trial judge. Where such procedures are unavailable, legislation should be enacted to make them available.

12. Advance payments

Recommendation

Any payment made voluntarily to the plaintiff by a defendant or the defendant's insurer prior to a final verdict should not be admissible at trial as evidence of the defendant's liability. Any such payment should be credited against a judgment for the plaintiff, should such a judgment be entered.

Supporting Reasons

Voluntary payments by an insurer to the plaintiff prior to a verdict should be encouraged since they often make it possible for the plaintiff to receive prompt remedial medical care or to sustain himself, without undue hardship. Such an action tends to create an atmosphere of cooperation and concern which in turn may lead to an early and amicable settlement.

13. Notice of intent to sue

Recommendation

In order to commence a malpractice action, a potential plaintiff should be required to give reasonable (between 90 and 180 days, depending on local conditions) written notice of intention to sue to each prospective defendant. Failure to give such notice should not defeat the plaintiff's action, but may lead to sanctions on the plaintiff's attorney. Where the statute of limitations is due to expire during the notice period, the time for commencement of the action should be extended until the end of the notice period.

Supporting Reasons

A reasonable period of time for discussions prior to the institution of litigation should result in a weeding out of a greater number of doubtful claims, should permit the settlement of actions for which there is clear liability without the expense of court proceedings for both parties, and should lead to a general lessening of the animosity which often develops between the parties in the litigation process. In cases where arbitration is proposed on a voluntary basis, the extra time also encourages the implementation of such procedure. Also, a notice period is consistent with and supports the staff's recommendations with respect to the availability of review by a panel of experts and compulsory pre-trial review of claims before a complaint is issued.

14. Access to medical records

Recommendation

Patients should be able to obtain access to their medical records through their legal representatives without having to file a suit; and the health care provider should have five days in which to respond to the request.

Supporting Reasons

A patient has a legitimate right to know how treatment afforded him was conducted, among other things so that he can determine whether he received an acceptable level of care. In many jurisdictions, however, a patient must bring suit in order to obtain medical or hospital records concerning his treatment. Access to these records without filing an action would not only save time and expense; it might also contribute to amicable settlements of disputes in a greater number of cases. However, since there is also a legitimate need in some cases for confidentiality of records, or portions of records, it seems fair to require disclosure to the patient's legal representative (a lawyer or other authorized representative) in order that legitimately confidential materials which are not necessary to the patient's appraisal of a possible claim might not be disclosed.

15. Punitive damages

Recommendation

Punitive damages should not be allowed in medical malpractice cases. Rather, the medical discipline system, hospital licensure statutes and the criminal justice system should be relied on for such punitive action against an offending physician as may be justified.

Supporting Reasons

The basic policy behind allowing the plaintiff to recover punitive damages is the feeling that the defendant who has been guilty of gross misconduct should be punished. In medical malpractice cases, however, there is a medical disciplinary system, and in a particularly flagrant case a physician may also face criminal penalties. Medical practitioners should not be subject to the multiple jeopardy of punishment by the assessment of punitive damages as well as the imposition of disciplinary, and possibly criminal, sanctions. In addition, a demand for punitive damages is counterproductive in that it heightens the adversary nature of medical malpractice litigation and needlessly complicates settlement negotiations.

16. Non-taxable status of awards

Recommendation

The jury should be instructed that an award for lost earnings is not subject to income taxation.

Supporting Reasons

Section 104(a) (2) of the Internal Revenue Code of 1954 excludes from gross income "the amount of any damages received (whether by suit or agreement) on account of personal injuries or sickness." In most jurisdictions, losses of past and future earnings are calculated on the basis of the gross amounts the plaintiff would have earned but for the injury. Also, in most jurisdictions the jury is not told that the plaintiff's award is tax-free, so that the plaintiff is benefited to the extent that the tort recovery for lost earnings does not reflect a deduction of the income taxes that would have been paid on actual earnings. Admittedly, the tax on future earnings cannot be computed with certainty, but at least the jury should be made aware of the situation and allowed to compute the award with the tax benefits in mind. Although the staff has not looked into the extent of comparable provisions in state or local income tax legislation, any such provisions also confer an additional tax benefit on the plaintiff, and therefore the jury should also be informed of these exemptions.

17. Exchange of experts' reports

Recommendation

Pre-trial exchange of experts' reports should be required. Where reports have not been made, the parties should be required prior to trial to disclose the identity of their experts.

Supporting Reasons

The requirement that experts' reports be exchanged and that the identity of experts for each party be disclosed prior to trial should enable the parties to prepare better for trial and should improve the quality of expert testimony by insuring informed cross-examination. Such an exchange should also lead to informed discussions among the parties more often and the earlier settlement of more claims.

18. Panels of experts

Recommendation

Professional medical societies should encourage physicians to cooperate fully in medical malpractice actions and should establish pools from which plaintiffs' and defendants' counsel can obtain expert consultants.

Supporting Reasons

Injured patients and their attorneys often complain about the difficulty of obtaining expert medical consultants. The establishment of pools of medical experts by local medical societies should alleviate this problem and provide a good example of cooperation between the medical and legal professions. In addition, from the health providers' perspective, it is far better to provide competent experts than to force plaintiffs to search out distant experts who may not be familiar with local conditions.

Editor's Note: Seven recommendations relating to tort procedures were submitted to the House of Delegates of the American Bar Association on August 8, 1977. They were accepted, although they were not voted on, and do not represent official ABA policy. They are (paraphrased):

1. Patients should be able to obtain access to the medical records without having to file a suit.

2. Medical societies should establish pools from which plaintiff's and defendant's council can obtain expert consultants.

3. Any advance payment made voluntarily to the plaintiff should not be admissible at trial for any purpose.

4. A plaintiff's pleadings as to the amount of injury (ad damnum) should not be permitted to allege a total dollar amount.

5. Pre-trial exchange of expert's reports should be required.

6. Itemized verdicts should be permitted at the discretion of the trial judge.

7. Whether or not to allow pre-judgment interest should be left to each jurisdiction.

At a subsequent meeting on February 15, 1978, the ABA House of Delegates rejected the following recommendations:

1. Notice of intent to sue. (Written notice must be provided of intention to sue each prospective defendant.)

2. Collateral source rule (damages should be reduced by collateral source payments received by the plaintiff).

3. Periodic payments (permits payment of future damages in periodic installments).

4. Contingent fees (a decreasing maximum schedule of contingent fees to be set by court order).

The following recommendations were accepted:

1. Changes in statute of limitations (parts of the recommendation were referred back for further study).

2. Ceilings on awards (the House of Delegates agreed that there be no ceiling on economic loss, but also voted that there should be no ceiling on non-economic loss).

The remaining recommendations were not questioned and thus not acted on by the House of Delegates. They stand as recommendations by the Commission without consideration by the ABA House.

REFERENCES

1. *Legal Topics Relating to Medical Malpractice,* U.S. Department of Health, Education, and Welfare. GPO: 1977, 241-205/5040.
2. Although the staff's recommendations are based in part on reasonably complete legal research, no attempt has been made to provide citations to support each statement made. For those who are interested in extensively researched presentations, see the student law review commentaries in 1975 Duke L.J. 1417 and 50 Tulane L. Rev. 655.
3. See e.g., *Canterbury* v. *Spence,* 464 F 2d 772 (D.C. Cir. 1972.)
4. See Ohio Rev. Code Ann., Section 2317.14, effective July 28, 1975
5. See e.g., *Pederson* v. *Dumouchel,* 72 Wash. 2d 73, 431 P. 2d 973 (1967), *Brune* v. *Belinkoff,* 354 Mass. 102, 235 N.E. 2d 793 (1968). But see, *contra, Gambill* v. *Stroud,* 531 S.W. 2d 945 (1976).
6. A general practitioner is sometimes referred to as a "family practice specialist," and there is some movement towards defining standards and educational requirements for a family practice specialty. However, regardless of what he is called, a physician in general or family practice performs essentially the same kinds of general medical services.
7. See *Tvedt* v. *Haugen,* 70 N. Dak. 33, 294 N.W. 183 (1940).

Medical Law and the Physician

JOSEPH M. HEALEY, J.D.

A physician practices medicine by virtue of, and in accord with, a mandate from society. This mandate has a variety of sources, formal as well as informal, implicit as well as explicit. These sources include such diverse elements as the mores and traditions of society and the legal definition of medical care and medical care providers. The elements of this mandate may vary from society to society, but generally include:

(1) the range of permissible activity in the pursuit of health;

(2) the rights and duties of the physician;

(3) the rights and duties of the patient;

(4) the reasonable expectations of both physician and patient about the process and outcome of health care interventions;

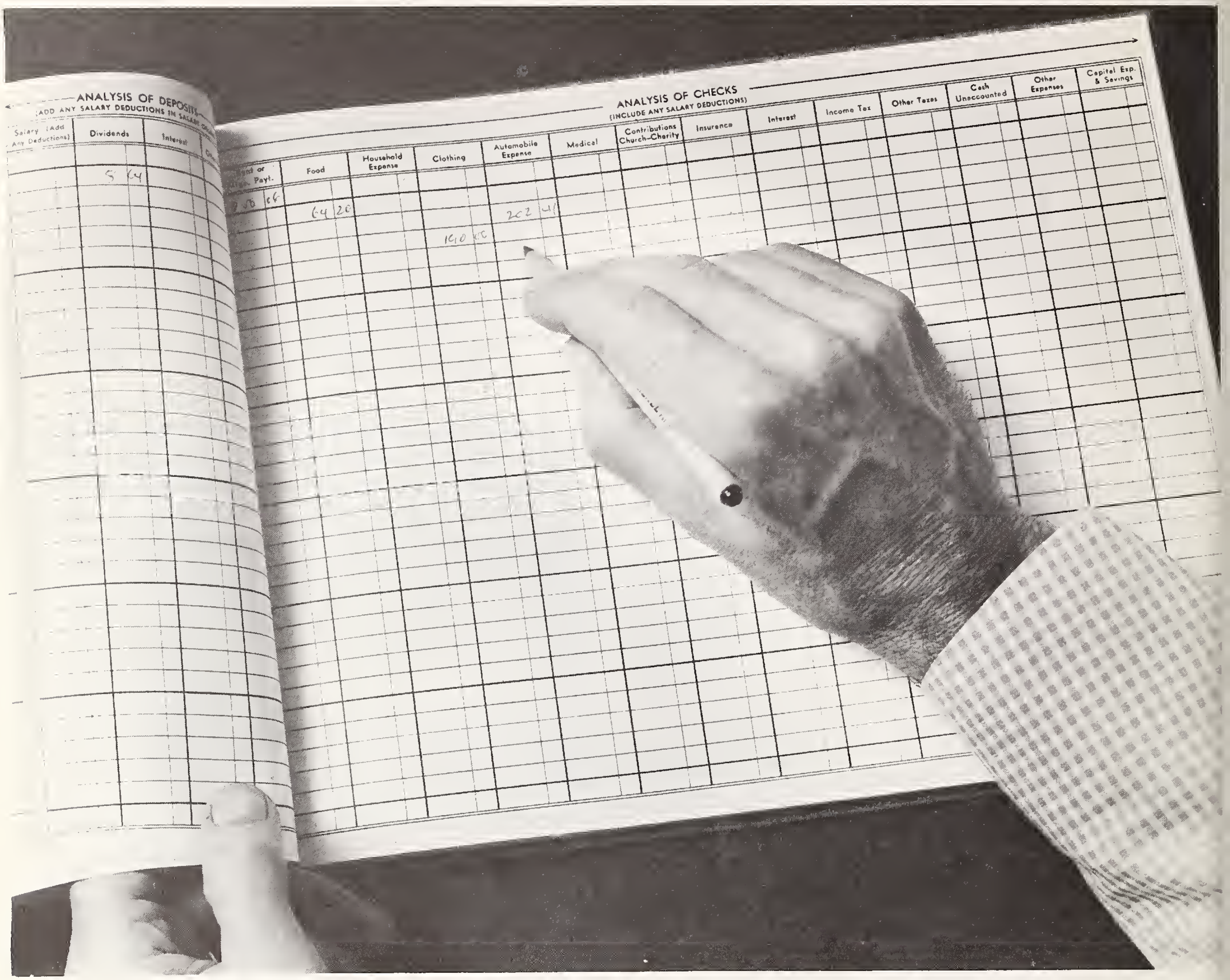
(5) the goals of the physician-patient relationship.

The existence of this mandate is a reminder that medical care is both personal and social in character. It is personal in the sense that the physician has obligations to the specific patient seeking care. It is social in the sense that there exist simultaneously obligations to society which transcend the specific physician-patient relationship. It is the existence of the simultaneous obligations which often give rise to perplexing dilemmas for the physician.

In a society such as ours, characterized by an extensive reliance upon law and the legal process, it is not unusual for major components of the physician's mandate to be expressed through legal mechanisms. In a wide range of specific examples, from the definition of medical practice and the establishment of criteria for the licensure of physicians to the legal formulation of appropriate criteria for the determination of death, the law contributes to the formulation of the physician's mandate by identifying values which must be protected in the physician-patient relationship, by establishing boundaries of medical care decision-making, and by exercising an influence on the quality of medical care. Examples of all three abound. For instance, the law has placed a great value on the principle of individual self-determination. This principle is vindicated by the requirements that the patient consent to proposed medical treatment and that the consent be informed, voluntary and competent. This principle may be disregarded by the physician only at the risk of potential liability. An example of the law's functioning as a boundary of medical care decision making may be seen in the prohibition against homicide. The physician is bound, as any citizen would be, to avoid the unjust taking of human life. This becomes an important limitation in some situations. Finally, a range of legal mechanisms from malpractice to Professional Standards Review Organizations are designed to influence the quality of medical care.

A physician practicing medicine in contemporary America needs to be aware of cases, legislation and policy developments which are the sources of many rights and duties for the practitioner. With this issue, *Connecticut Medicine* inaugurates a new feature "Law, Medicine and Public Policy" to provide an examination and exploration of developments in medical law. For almost twenty-five years, William J. Curran, Frances Glessner Lee Professor of Legal Medicine at Harvard Medical School, has provided such a column for readers of the *New England Journal of Medicine*. As a former student of Professor Curran's who owes much to him for his encouragement and support, I hope to provide for the readers of *Connecticut Medicine* a similar service. I hope that these columns can provide information, analysis and reflection which will assist Connecticut physician in understanding and appreciating the mandate to serve which society has bestowed upon them. In the months to come, topics like the Quinlan case, the Supreme Court review of medical school student admission and promotion policies, the physician's right to terminate a physician-patient relationship and the patient rights movement will be discussed. My hope is that, over time, by presenting traditional principles and newly-developed principles it will be possible for Connecticut physicians to appreciate the law's role in the health care process. Next month, we begin by examining the question whether the law has any legitimate role in regulating the health care process.

JOSEPH M. HEALEY, J.D., Assistant Professor, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.



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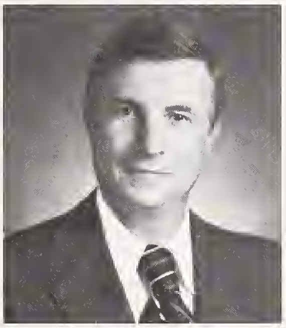
The President's Page

Should the Health Industry Be Regulated as a Utility?



While we would like to believe that all health care decisions are made solely in the patient's best interests, we know this to not be the case. Institutions and individual decisions may be motivated by such things as competition, defensive practice, prestige, and the ability to attract charitable donations. Until recently, physicians were not particularly sensitized to costs nor were they encouraged to be by colleagues, hospitals or society at large. Politics, in a general sense, does enter decision making especially with respect to the acquisition of new technology.

Scholars and regulators have concluded that health costs must be restrained especially the technological acquisitions which are expensive. Conventional wisdom states that all providers act only from selfish motives and that only governmental regulation could succeed. The concept of Placement Review and its two components, Certificate of Need Review (CON) and Capital Expenditure Limitation (CAP) were developed. But while the regulatory authorities are perceived as impartial and reflective of the public interest, they are in fact subject to political and other stresses which have impaired their effectiveness elsewhere.

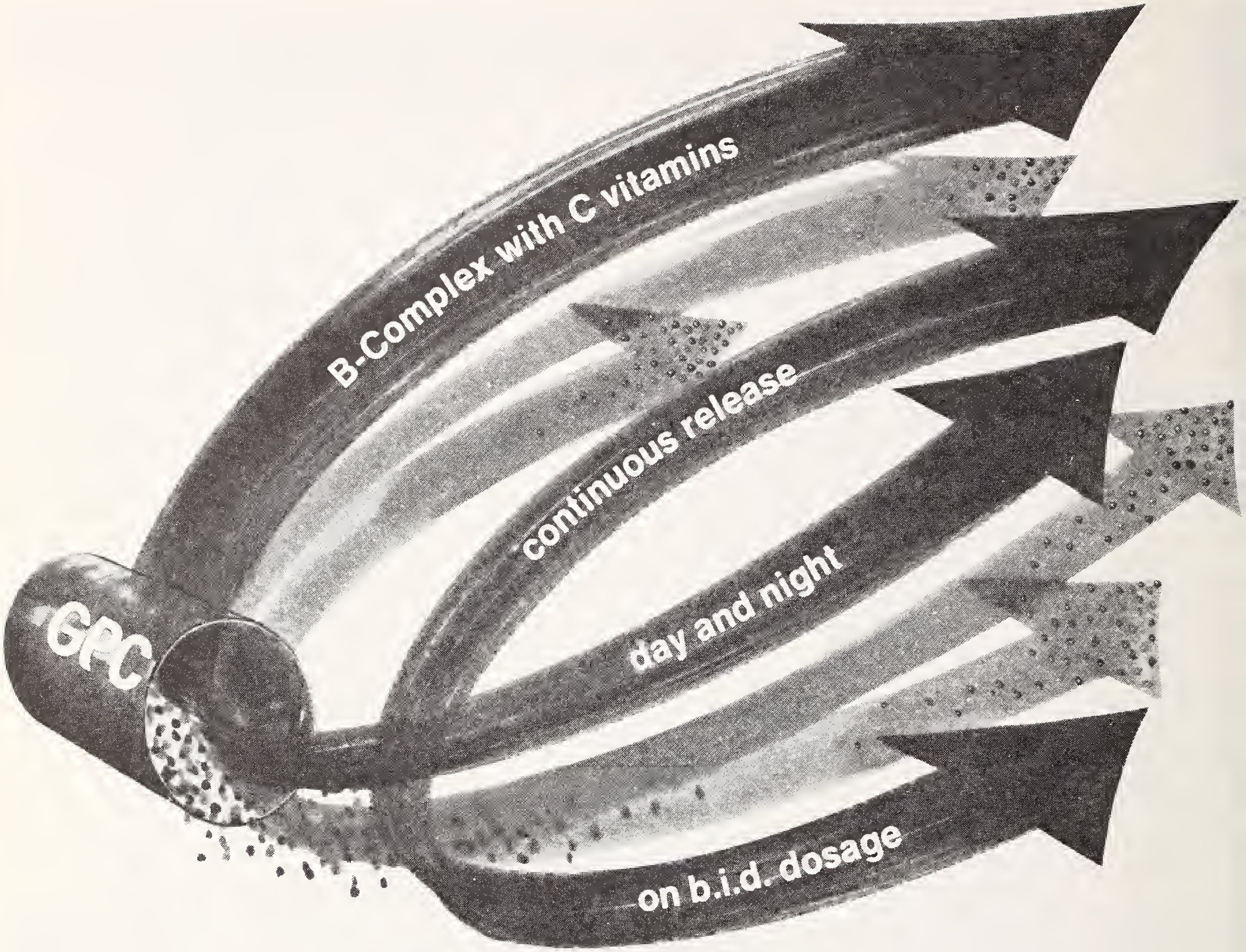
Utilities have been regulated for many years in very analogous ways. More conventional wisdom postulates that the regulator not be a professional, and it seems that the less expertise he has, the better it is. So he must rely on technicians for the information to make his often technologic decisions. And the technicians can and did capture the regulator who regulates them in many cases. Moreover, the utility regulator has an effect on the "market." Disapproval of a new technology could protect the investments of powerful market forces in old and inefficient equipment. Conversely, limited approvals could lead to monopolies created by the regulator. In the health industry there is a unique component, the third party payer who can influence the regulator in order to protect large current investments in technology and prevent innovations viewed as too costly. And not the least, large industry components could sway the regulator to give them alone the new technology thus improving their market position and power even more. All these possibilities can be related to real examples in utility regulatory history.

Despite the grave doubts expressed by some students of regulation as to the efficiency, fairness and cost effectiveness of such regulation, CON is federally mandated to be functioning in every state by 1980. And attempts have been made to extend it to non-institutional health providers. Since most ambulatory care is on a fee for service basis, not cost reimbursed, decisions already must be cost-efficient. Scholars have suggested that the application of this type of regulation here might well increase costs and decrease efficiency. But the proponents persist because of politics, not facts, nor fairness, nor logic!

Without, mind you, admitting CON review's weaknesses, and in their infinite wisdom and to be sure control was achieved, the regulators have proposed legislation to place a national limit on capital expenditures with allotments to each state based on population. While it sounds simple, fair and inexpensive to administer, the political maneuvering it would precipitate in each state is horrendous to contemplate. Does it allow for population growth? No. How can a CAP be established not so low as to stifle necessary growth and replacement nor so high as to allow waste? No one knows how. How much will regulatory costs eat up of the imputed savings? They don't know. One thing is certain and that is that regulation of 215,000 physicians will be more expensive than 7,000 hospitals and that providers would surely learn to subdivide proposed expenses so each item would be less than the minimum triggering the CAP mechanism. And the regulators would then lower the minimum, et cetera and ad nauseum!

Ignoring Peer Review, PSRO's and Utilization Review, all which have potential for cost containment, I think I have indicated why utility regulation of the health industry may be of dubious value. The more detailed it becomes, the more dubious it seems to be. The Voluntary Effort of hospitals and medicine well may be just as reasonable an answer as regulation. Sadly, it took the threat of the latter to bring about the former, so perhaps the threat has to remain real. But if the hospitals and our profession learn cost consciousness as a way of life, there is every reason to believe voluntarism will work. So far it shows impressive signs of effectiveness.

Jerome K. Freedman, M.D.
President



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Reflections from the Dean's Office

Academic Dualism or What Comes First?

ROBERT U. MASSEY, M.D.

September is one of those times of beginnings that recur for different reasons throughout the year; in the academic springtime all eyes are on the individual student who is commencing a new life in the world; in the fall attention turns inward upon the school, an enterprise whose purposes are redefined and reformed year by year.

The debate over the relative importance in the curriculum of content, skills, attitudes, and pedagogy goes on while every academic partisan is struggling for ascendency and at the same time calling for balance. It is only the balance that changes. I think the issues at root are the old ones of faith and works, of Mary and Martha, which may represent the dualism of mind and hand, contemplation and action, theory and practice, or, in educational jargon, content and problem solving. It may even have something to do with Cartesian dualism, which is now unpopular, but I am not enough of a philosopher to be sure. In the spirit of peacemaking, someone usually mentions the inseparable importance of the two blades of a pair of scissors.

Because means are limited, as well as the patience of our students, and demands sometimes seem limitless, boundaries have to be set. That task is made especially difficult in schools of medicine not only because of rapid scientific and technological progress, but also because of changing social fashions and political posturing. Unless we leave something more out of the curriculum every year, and turn down most suggestions for new programs, medical education could expand to fill a lifetime.

But that is exactly what we have always said anyway: the medical student begins in September of the freshman year a lifetime of learning. Helping in that beginning is the duty of the faculty, but their work can be successful only if the real beginning has already taken place before. Osler said of education that there were "only three subjects—science, art, and the knowledge of men—of equal importance one with another." And about the science part he said, "By scientific I do not mean the acquisition of the bare facts of science, but an understanding of its methods, a realization of its meaning and an inoculation with its spirit. It is an attitude of mind, a sort of reflex, which at once on the presentation of a problem makes a man burn until its solution is accomplished,—"[1]

In his autobiography, *One Man's Education*, Wilmarth Sheldon Lewis speaks of a liberal education as providing an enlargement of life, like walking through an archway, a more ample view. The generation of the Sixties had a great deal to say about consciousness raising; I suspect that they might not have felt the awareness of that need so intensely, nor sought such unusual ways of achieving it, if we had offered an ampler vision through a liberal education. That they needed to invent insights which had been commonplace to artists, philosophers, writers, and theologians even in Osler's day is clearly a judgment on the nature and the quality of the education we provided. We offered them few analogies.

A liberal education, and a scientific education, (they are inseparable) must certainly have substance and content, facts and memory work, or there is no material with which to form attitudes or to solve problems. But habits, which have to do with behavior and judgment, are the essence of education, and Whitehead gave weight to that when he said that education must be religious, inculcating "duty and reverence."[3] This applies equally to professional education and to the liberal arts; that medical schools are obliged to inform and to train does not relieve them of their duty to educate. In *One Man's Education*, Lewis quotes William Johnson Cory, an Eton master, on what distinguishes a school of the first rank: "—you are not engaged so much in acquiring knowledge as in making efforts under criticism. . . . A certain amount of knowledge you can indeed with average faculties acquire so as to retain. . . . But you go to a great school, not for knowledge so much as for arts and habits; for the habit of attention, for the art of expression, for the art of assuming at a moment's notice a new intellectual posture, for the art of entering quickly into another person's thoughts, for the habit of submitting to censure and refutation, for the art of indicating assent or dissent in graduated terms, for the habit of regarding minute points of accuracy, for the habit of working out what is possible in a given time, for taste, for discrimination, for mental courage and mental soberness. Above all you go to a great school for self-knowledge."[2]

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ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut School of Medicine, Farmington.

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Norman A. Zlotsky

EDITORIALS

Changing the Malpractice Picture

A recent government study led to a series of recommendations to improve tort law related to medical malpractice. These recommendations are reviewed elsewhere in this issue (pp. 595-602). While these changes may be beneficial, and while they certainly deserve further discussion, they should not stand alone when we consider the problem of medical malpractice.

The 18 recommendations, with one exception, can be classified into two broad groups:

(1) changes in the rules for developing and executing a lawsuit for medical malpractice, and

(2) the changes in the rules regarding awards that might be made.

Most of the recommendations would make it more difficult to develop and successfully pursue a malpractice claim. The one exception has to do with the way plaintiff lawyers are paid for handling such cases. (While the recommendation would preserve the contingent fee system, by which a lawyer gets a share of the award, it would provide that the share decreases with higher awards.)

Trial lawyers will oppose most of the recommendations, especially the one concerning contingent fees. Physicians can be expected to support most of the changes. Thus, we can expect a continued lively exchange between the two professions.

To outsiders, it may appear that the issue is simply a battle between the two professions. If that is the appearance, society would be justified in asking, who is interested in the public? Who is concerned about the people who may be injured as a result of receiving medical care?

We are, of course. That is why, while encouraging tort reform, we must also vigorously encourage innovation in other areas. Two areas are especially important: assuring high quality medical care, and compensation of injured patients.

Quality of Care

Our concern about medical malpractice suggests two ways that we can help assure quality medical care. The first is to make sure that the procedures used for evaluating and disciplining physicians are equitable and efficient. Physicians who cannot or will not provide good care must not be allowed to provide bad care. Another government sponsored study reviewed medical licensing and disciplinary laws and procedures in the 50 states.[1] Such laws were originally passed to protect the public from poorly trained, unethical, and incompetent practitioners. The report noted that the system of medical licensure and medical discipline seems to be successful in regulating the physicians who enter practice for the first time. However, "there is considerable agreement that the current system is far less effective in managing the disciplinary problems that emerge after physicians have entered practice. . . . (There is) increasing demand that adequate supervision be exercised over the quality of (medical) services."

While many states have already amended their licensure laws as a result of the malpractice crisis, there is a clear need to continue the process, and to establish uniform acceptable standards for an individual to continue practice of medicine. Several recommendations have been made that should be considered.[1] One is a recommendation to undertake studies to explore limiting medical licenses and medical practice to areas of a physician's special field of training. Limited licensure, of course, is not a new idea, but is one we must deal with. Another recommendation is that licenses should be renewed periodically, with a physician being required to demonstrate participation in programs of continuing education. Also, state medical discipline boards should be strengthened, with the establishment of adequate budgets and staff positions to insure thorough investigation, follow through, and record keeping. Grounds for disciplinary action should be specified in greater detail. ("Unprofessional conduct" is an almost useless term.)

In many states, *procedures* for medical disciplinary proceedings are inadequate. While the Model State Administrative Procedure Act is a good prototype, it should be adapted for the particular needs of physicians. Another recommendation is that licensed physicians be required to report instances of other physicians' medical misconduct. And, instead of requiring the state to either remove the physician's license or do nothing, a broad range of sanctions should be available. Sanctions imposed should fit the severity of the offense.

The above recommendations and others are aimed at assuring the competency of physicians in practice. Another quality of care proposal suggested by the malpractice problem is to design programs that would reduce the number of injuries suffered by patients. Some of these programs could be very simple. For example, for Medicare patients, the incident that leads to the most malpractice claims is falling.[2] Most of the falls occur in the patient's room. It would not seem impossible to design a program that would prevent older patients from falling in their hospital rooms. A successful program would have a noticeable impact on the malpractice picture.

Tort law changes and improvements in quality control of medical care are two of the major ways we can affect the medical malpractice problem. The third way is to improve the mechanism by which injured patients are compensated.

Insurance Innovations

Medical liability insurance is not an efficient way of compensating patients. Only 25 to 30¢ of each premium dollar finds its way to the injured persons. The rest of the money is consumed as friction costs in the system. Yet society has shown the desire to protect individuals from losses, especially losses over which they have no control. The protective mechanism most used in this country is insurance. Some would say that no-fault insurance would solve the medical malpractice insurance problem. Under such a scheme, anyone who is injured while receiving medical care would be compensated for his/her loss. The model would be "trip insurance." The traveler purchases an insurance policy before going on a trip; if he is injured or dies, compensation is given to him or his estate. It is not necessary to prove negligence, or even to hire a lawyer. But such a plan for medical care would probably be far too expensive and would make being sick possibly too rewarding.

An alternative insurance plan has been proposed.[3] The plan would pay for some but not all injuries associated with medical care. The fundamental element would be the assumption by each hospital of liability for all negligent injuries that would occur therein. Patients would be compensated for actual net losses due to injuries or suffering, with the exception of injuries that would occur regardless of treatment, or those that are part of the expected risk of treatment. There would be a designated list of injuries for which payment would be made. It is the list of injuries that is the basis for the name of the plan, "designated compensable events insurance" (DCE).

If an injury occurs which is on the DCE list, an insurance office would pay the actual damage immediately. There would be no defense costs, and the awards would be made according to a schedule of payments.

The DCE plan would have several advantages. It would preserve the insurance concept, in that it would be general insurance taken out in the patient's behalf by the hospital. It offers several mechanisms by which costs would be controlled: there would be no defense costs, and payments would be according to a schedule. Quality of care could be enhanced if the system were used in connection with a strengthened disciplinary agency and an assortment of available sanctions. Health care research would also be enhanced, since particular injuries related to procedures, for example, would be identified and could be studied further. No where in this country is the DCE plan being tried out. Perhaps we have reached the time to move forward in this direction.

Tort law changes are important in improving the malpractice problem; so are steps to assure high standards of care, and to try new forms of insurance.

James K. Cooper, M.D.*

Associate Professor
Department of Community Medicine
College of Medicine, University of Kentucky Medical Center
Lexington, Kentucky

*Dr. Cooper was the Project Officer for the study of tort law reform reviewed in this issue (pp. 595-602).

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2. *1976 Medical Malpractice Closed Claims Study,* submitted to NCHS, DHEW in fulfillment of contract 282-76-TQ-0497 by Westat, Inc., March 1978
3. Cooper JK, Egeberg RO, Stevens SK: Where is the Malpractice Crisis Taking Us? *Western J Medicine* 127:262-266, September, 1977

Can AMA Democracy Save Your Professionalism?

Prior to my service to the State Medical Society, I was long associated with organizations that took particular pride in their internal democracy, namely the AFL-CIO affiliated teacher unions. Our members cherished their academic freedom and professional independence fully as much as their right to organize and bargain collectively as publicly employed educators, (even though we never had the rugged independence of fee-for-service practitioners). As a result, our conventions were open, vigorous conclaves where anything could, and often did happen to the carefully laid plans of the leaders. We considered the old education associations that we supplanted in town after town as stodgy examples of administrator domination and paternalistic governance through well-orchestrated, well-oiled conventions, particularly at the national level.

After making the transition from the teacher's federation to the medical association, I half-expected that physicians' conventions would be of the *pro forma* "association" model. But an impressive surprise awaited me at the most recent two AMA conventions. Through the reference committee system, issues were discussed not only by delegates, but even by rank-and-file members. I have seen the ideas of individual members that were first discussed at the county level go on to receive support at the state meeting, and be carried by the delegates to the AMA where they were aired, argued, and actually adopted for action at the national level, all within a matter of months. Resolutions from Connecticut have had a particularly good track record in this respect.

In fact, the AMA may well be the most democratic national voluntary organization. This AMA democracy is a real and impressive asset that guards you against the entrenchment of unrepresentative leadership. It assures an organizational vehicle by which the best ideas and attitudes of the individual members can, by common agreement, quickly become effective in the national forum.

Unfortunately, there is a weak and dangerous link in this carefully forged chain of governance. That weak link is the non-member physician, whose voice is heard not at all in the highest councils of his profession, who pathetically cries out in the wilderness, and wonders why no one listens. If he joins his colleagues, attends a convention, and speaks his mind, he may find out that not only is he not alone, but that he may be the reagent that will precipitate a new majority opinion out of the robust mixture of ideas swirling all about him.

The raw material of democracy is diversity, but its goal is unity, for the strength to achieve the ends that can be agreed upon as common. That unity is weakened by every missing ingredient, by every idea that wasn't considered for lack of an advocate, by all those physicians who will not accept their share of responsibility for their beleaguered profession. *The pitiful fact is that half of all Connecticut physicians are in this category with respect to AMA membership.*

Take a lesson from the teachers, who for years left the responsibility of professional advocacy to others, thinking that "professionalism" put them above politics and organization. They finally woke up to find themselves virtual wards of the state, with their profession controlled by outsiders, their professionalism an illusion, and its standards of quality dictated by the expediency of the politicians who firmly held the purse strings.

Nothing is more important to the integrity of medicine than the freedom of its learned practitioners to exercise independent judgment in accordance with informed standards imposed by the profession upon itself, not dictated by non-professionals whose interest in the patient is political rather than medical. This freedom is more than donning a white coat and holding forth at grand rounds. The planners will be glad to leave you that much.

What is actually at risk in the battle that the AMA must wage on your behalf is not just your image, or your income; it is rather something far more precious—your ability to practice medicine in accordance with your best medical judgment and in your patient's best interest—in a word, your *professionalism.* (And what independence is presently enjoyed by employed physicians will not survive the loss of private practitioners.) *Half* of your army has deserted this battle.

Will Connecticut's physicians wake up one day to find themselves genteel wards of the state, timidly treating numbered patients in accordance with socioeconomic "guidelines" passed down from faceless bureaucrats in federal offices? Or will they each accept their responsibility to help preserve their professionalism, as priceless to their patients as it is to themselves? AMA democracy is a vehicle equal to this great task, I am sure, but as we used to say in the union, democracy doesn't work unless *you* do. Are you the missing ingredient?

If so, you may be missing more than you think before long.

Robert J. Brunell, M.A.

Connecticut State Medical Society's
Assistant Executive Director for
Educational and Scientific Affairs

Court Approves Danbury Hospital Operating Budget as Originally Submitted

In an opinion released on June 2, 1978, Judge J. Covello has approved the Danbury Hospital operating budget as it was originally submitted to the Commission on Hospitals and Health Care.

At issue was the hospital's contention that the Commission acted illegally in reviewing and approving budgets based upon regulations which were not adopted in accordance with the state's Uniform Administrative Procedure Act.

The CHHC used the regulations during the staff analysis of each hospital budget. The Staff analysis was the first step in the Commission's review of the budgets, and resulted in a recommended cut of $2,158,453 for Danbury Hospital, which was later reduced to $677,655.

A second major finding of the court was that a quorum of the Commission was not present on the date that the Danbury budget was approved, because the Deputy Commissioners were acting in place of the Commissioners of Health and Mental Health without sufficient cause.

Ten Commissioners constitute a quorum under the statute which governs the actions of the CHHC. On the day the Commission ordered the Danbury budget, ten Commissioners were present, but this included the Deputy Commissioners of Health and Mental Health. While the court allowed that the Commissioners could send their deputies under certain circumstances, no circumstances were found to exist in the present case that would have justified this action.

In concluding his decision, Judge Covello stated, "The court concludes that the decision of the Commission here was carried out in violation of statutory provisions and made upon unlawful procedures. . . . " The court, therefore, reversed the Commission's decision and rules that the operating budget as originally submitted be approved.

This decision in favor of Danbury is now another in a long line of defeats in the courts for the Commission. Since 1974 the CHHC has lost fourteen cases. Ten of these losses have been sustained since June of 1977.—*Change,* Newsletter published by The Connecticut Hospital Association, June 20, 1978.

Brief Summary of Prescribing Information
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For complete information, consult Official Package Circular. (12) TEGOPEN 9/11/75

Indications: Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

Important Note: When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

Contraindications: A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Warning: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

Precautions: The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

Adverse Reactions: Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

Usual Dosage: Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

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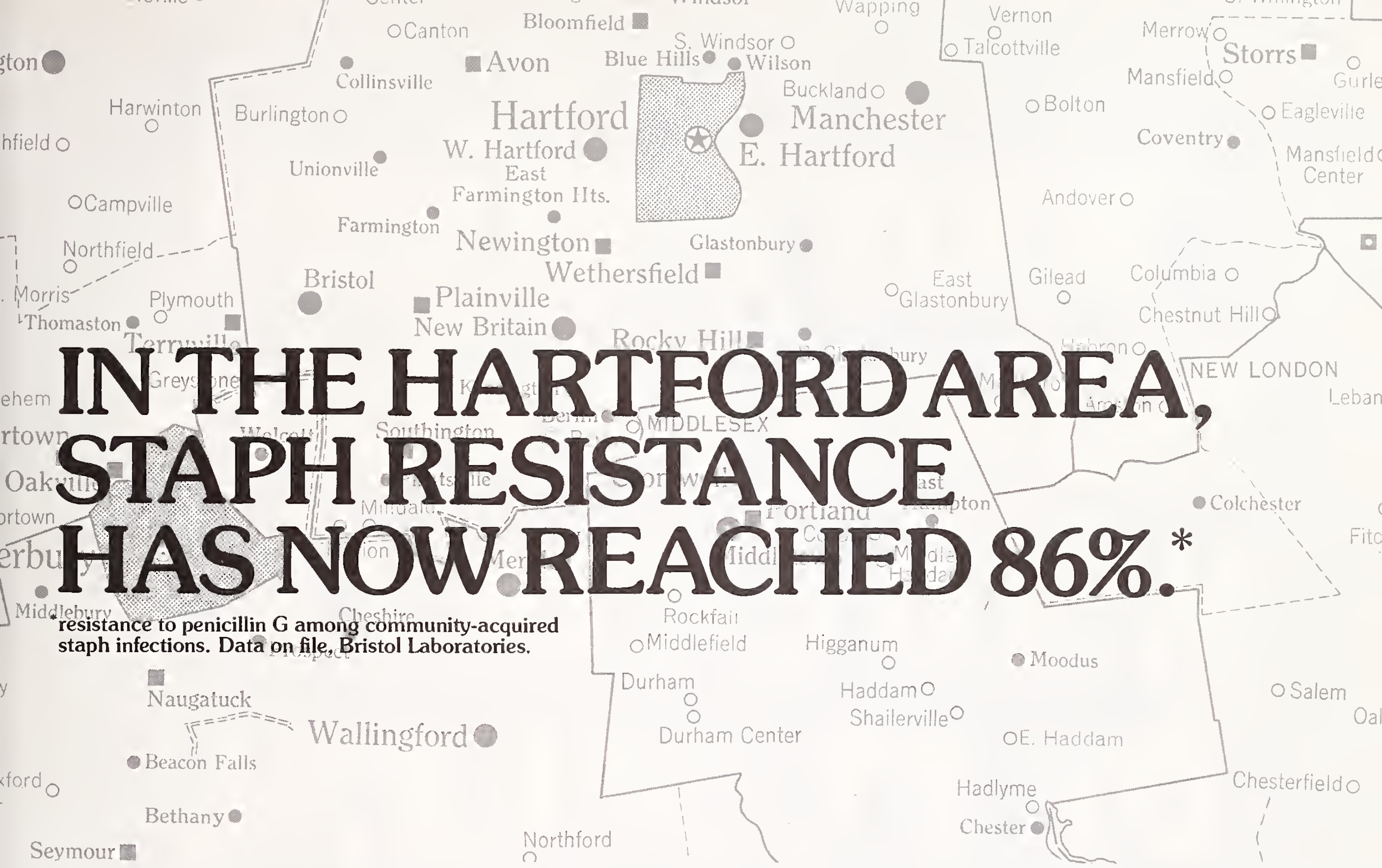

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*resistance to penicillin G among community-acquired staph infections. Data on file, Bristol Laboratories.

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Letters to the Editor

Letters to the Editor are welcomed and will be published, if found suitable, as space permits. Like other material submitted for publication, they must be typewritten *double spaced* (including references), must not exceed 1½ pages in length and will be subject to editing and possible abridgment.

MORE ABOUT INGUINAL HERNIOGRAPHY

To the Editor: Drs. Crawford and Klauber have in the June issue of *Connecticut Medicine* described very well the use of inguinal herniography as a method of demonstrating inguinal hernias and communicating hydroceles. No one will dispute the long proven diagnostic value of this well recognized procedure. What I must question is the statement in the abstract of the article that "inguinal herniography is a safe—method—." Dr. Klauber must recall that in a small series in another hospital he has had one child with infarcted bowel requiring a small bowel resection directly attributable to this diagnostic procedure.

Ronald W. Cooke, M.D.
Hartford, CT

The above letter was referred to Dr. Klauber who offers the following reply:

To the Editor: Damage to the bowel is a serious but, fortunately, rare complication of herniography. We have surveyed a number of institutions* with a total experience of over 7,500 herniograms and found two further cases, other than our own, which required laparotomy. One case also required resection of a small portion of the bowel; the other patient, in whom an intramural hematoma was excavated, might well have recovered without surgical intervention.

We understand Doctor Cooke believes that routine bilateral groin exploration in the presence of demonstrable unilateral pathology is a perfectly safe procedure, in his hands. Few surgeons, especially general surgeons and urologists who operate on a child occasionally, have either Doctor Cooke's skill or experience. We have seen a few boys with an iatrogenic, ectopic testicle after surgical exploration of the groin. Division of the vas deferens, inguinal nerves, and testicular atrophy are all known complications of simple groin exploration. We believe that the trauma and risk of performing 75% of unnecessary groin explorations outweighs the 0.04 (1:2500) risk of subsequent laparotomy, following herniography.

*The institutions are:

John Dempsey Hospital, Farmington, Conn.
Johns Hopkins Hospital, Baltimore, Md.
Montreal Children's Hospital, Montreal, Quebec, Can.
Newington Children's Hospital, Newington, Conn.
Hospital Ste. Justine, Montreal, Quebec, Can.
St. Louis Children's Hospital, St. Louis, Missouri

George T. Klauber, M.D.
Director of Pediatric Urology
Associate Professor of Surgery (Urology)

and
D. Beatty Crawford, M.D.
Assistant Professor Diagnostic Radiology
University of Connecticut Health Center
Farmington, CT.

RUBELLA IMMUNIZATION

To the Editor: Although I am not sure if I qualify as a highly respected pediatrician in the greater Hartford area, I have been quite concerned about the recent rubella question that was raised in Rocky Hill. In the June, 1978 issue of *Connecticut Medicine* there were two letters concerning rubella immunization. I agree with Dr. Lepow's conclusions.

There are many aspects about Dr. Quintiliani's letter that concern me. First and foremost, the letter is written to a scientific publication but in no way does it resemble a scientific document. The letter relies upon his personal position and upon excerpted comments from communications from other physicians. The case for early rubella vaccine is well documented.[1] [2] The American Academy of Pediatrics has no qualms in recommending rubella vaccine from age 15 months.

Dr. Quintiliani states that the giving of rubella vaccine is controversial. I think that it is only controversial to a small number of physicians in this country. He compares the rubella program to the swine flu immunization program. In my mind, there is no comparison between the two programs. The rubella program was begun after much more research and thought and the follow-up has been extensive. Dr. Lepow's letter added to material found in the previous listed sources answers Dr. Quintiliani's other important points.

Unless rubella in the United States has spontaneously disappeared, then immunization is the best explanation for the marked decrease in congenital rubella syndrome. England supposedly has not seen the disappearance of this disease. The fact that congenital rubella has not been a major problem in the 1970's is an important public health triumph. Unfortunately rigid policies and laws are required to ensure immunization success.

I am not sure if an undocumented letter and statements from a physician who is respected as an expert contribute to the current knowledge of the lay public and to the future health of unborn children.

Jerome E. Lahman, M.D.
Rockville, CT

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2. Krugman S, Ward R, Katz S: Infectious Disease of Children, St. Louis, 1977, The CV Mosby Company, pp 284-289.

To the Editor: I have just finished reading the letters in the June issue of *Connecticut Medicine* discussing rubella vaccination policies and justifications. I would like to add my thoughts as a practicing pediatrician on this matter.

Rubella vaccine, given to children under 12, is the only vaccine that we use that offers essentially no advantages to the recipient. In fact, I cannot think of any pharmaceutical or procedure that we do for our patients that similarly has no advantage to the recipient. There are 2 justifications given for doing this to our children. First, it is argued, if we give the vaccine to our children when they are young and a relatively captive easily reached population, they will be protected when they enter child bearing age and are less easily reached. Second, if enough children are made immune, the "herd" effect will protect nonimmune adults in the community. Both arguments have serious weaknesses, medically and, I believe, ethically.

The first rationale obviously applies only to girls. It gives us no reason to immunize males. Even for females there is some doubt as to its validity. Dr. Lepow refers to studies proving efficacy for up to seven years. This time span is still totally inadequate for a vaccine given at 16 months and meant to protect 35 years later.

Furthermore, there are other approaches to the problem. Childhood is not the only time we have a captive population. Ideally we should be testing all females at age 10 to 12 for rubella titers and then immunizing, or offering immunization, to those demonstrating absent titers. This procedure will, of course, miss some girls. But there are other times in a female's life when she is once again captive. Rubella titering should be mandatory for all girls before a marriage license is issued. It should be done at all first prenatal visits or on delivery of the first child to protect future pregnancies. It could perhaps be made a requirement for entry into high school, or made a mandatory part of all preemployment physicals. There are many opportunities to find the girl who misses her rubella test at age 12. Furthermore, can we really ethically justify using any pharmaceutical, particularly a live virus vaccine with all that implies in terms of immune reactions, adventitious viruses and so forth, on the basis that it *might* be needed many years later, and that we *might* not be able to reach the recipient at that time?

The second rationale likewise has faults. In studies I have seen, having a large population of immunized individuals has not prevented spread of the virus to unimmunized individuals when the virus has appeared. What is more troublesome for me to justify is again the ethical issue of giving any substance to individuals who do not in any way require it or can be helped by it, for the purpose of protecting another individual who, be it through lack of knowledge, ignorance, or disinterest, does not or will not protect herself.

As a practicing pediatrician I do give rubella vaccine to my patients, generally in the convenient MMR form. I do this because I do not want my patients caught between my feelings on this issue and the intransigence of school superintendents and legislators. This is not the parents' battle but should be resolved by the medical community. I would be much happier and feel in a more tenable ethical position if we in America adopted the British policy on this issue and give rubella vaccine only to those who truly will benefit from it: females who are entering child-bearing age and who are not immune.

Kenneth M. Robbins, M.D.

Middletown, CT

BOOK REVIEW

Heart Attack: A Question and Answer Book. By Oscar Roth, M.D., F.A.C.C., with Lawrence Galton and the editorial assistance of William D. Roth, Ph.D., and Ned Thomas. 262 pp. Philadelphia: J.P. Lippincott Company, 1978. $8.95.

Telephone in one hand, cigarette in the other, I told my doctor about the persistent pain in my chest, wondering whether I would finish smoking—or vice versa. It seemed like my Pearl Harbor: December 7, 1973.

Had it then been possible to read Dr. Oscar Roth's invaluable book, *Heart Attack*!, I might have stopped splitting wood at the first pain, forsaken ping-pong at the second, and have given up cigarettes (pp. 69 and 119 ff.), this last a miracle that my attack accomplished for me.

At my doctor's insistence, I found myself at the Yale-New Haven Hospital's emergency room (activity described on pp. 41 ff.), no sooner hooked up to a heart monitoring device than an alarm went off. But the nurse assured me that the alarm only signaled her error in leaving a certain switch open. Fortunately, my ignorance that it *was* an alarm had protected me from needless anxiety.

It is in *selectively* curing the patient of such ignorance that Dr. Roth's skill is best shown. While maintaining a serious tenor, he refuses to sound needless alarms. I know that I would not have been helped by knowing in advance of my attack that the monitor would notify me promptly if my heart stopped beating. The author's advice: Don't look at or listen to the monitor.

The book answers questions about the post-emergency period in a chapter entitled, "Afterward." I found most interesting the pages on "Type-A Behavior" which produces tension (pp. 125-30), depression *(passim)*, and transcendental meditation (TM) which, regrettably, is only mentioned.

There is impressive information about angina, false angina, drugs, varieties of research, and encouraging trends in coronary mortality rates. The rates have dropped over 20 per cent for most age groups since 1963 and Dr. Roth explains why.

Only in two diets, one reducing cholesterol (Appendix E.) and the other reducing weight (Appendix F.) did I find myself at first confused. Consumption of shellfish and eggs is low on the former but average on the latter. Perhaps an introductory note to the second diet would have cleared up this seeming inconsistency.

Heart Attack is a thoughtfully optimistic book that patients and their families will want to read and keep close at hand.

John Maher, Ph.D.

John Maher is Professor of Economics at Southern Connecticut State College and consultant to lawyers who tell him he never looked healthier.

NOTICES

ELECTROCARDIOGRAPHY AND TREATMENT OF CARDIAC EMERGENCIES

October 25, 1978

Eight hours of Category I, Continuing Education Credits, AMA, Connecticut Academy of Family Practice and American College of Emergency Physicians.

Further information may be obtained from Dr. Saul Lande, Director of Emergency Medicine, The Hospital of St. Raphael, New Haven, CT 06511 or by telephone to (203) 789-3469.

NOTICE TO CONTRIBUTORS

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J. Alfred Fabro, M.D., Editor
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OBITUARY

DAVID A. GRENDON, M.D.
1903 - 1978

David Arthur Grendon, M.D., died July 7 at Sharon Hospital after a long illness.

Dr. Grendon was born in Brooklyn, New York, and received his preliminary and college education in New York City, the latter at City College of New York, graduating in 1924. He received his medical degree at Harvard in 1928. He returned to New York City for his internship at Bellevue Hospital from 1928-1930 which was followed by an appointment as clinical assistant at Bellevue from 1930-1935. He then became interested in cancer and had a senior residency at Pondville Hospital from 1935-1938.

Enriched by these experiences, his chief interest became roentgenology. He was appointed resident at the Bronx Hospital in roentgenology from 1938-1942, and was certified in roentgenology by the American Board of Radiology in 1942. He then entered the service as a medical officer, assigned to the Panama Hospital and was later chief in radiology at the Gorges Hospital from 1943-1946. He was discharged as a lieutenant colonel.

While working at Bellevue Hospital, he developed a lasting friendship with Dr. Josephine Evarts, who was influential in his starting a medical practice in Kent, Connecticut. While in Kent, he received his first appointment at Sharon Hospital in 1947, as a member of the medical staff, which he held to the present.

During this time he held the positions of chairman of the Department of Radiology from 1947-1976 and chief of staff in 1969. He was also a member of the staff at the Fairview Hospital from 1952-1972, radiological consultant at the Wassaic Developmental Center from 1949 to the present and a member of the Rip VanWinkle Clinic for many years.

He later became interested in county and state appointments and was elected councilor to the Connecticut State Medical Society from Litchfield County Medical Association in 1958, serving three consecutive terms through 1966. While serving as councilor for Litchfield County Medical Association, he also devoted much of his time to the affairs of the county, serving on the executive committee and became president of Litchfield County Medical Association in 1970.

Meanwhile he was elected treasurer of the Connecticut State Medical Society, serving from 1966-1969, and then vice-president of the Connecticut State Medical Society leading to presidency in 1972. He was elected vice-speaker of the Connecticut State Medical Society House of Delegates from 1975-1976 and then speaker of the House of Delegates from 1977 to the present.

One of the many important positions held by Dr. Grendon through his many years of service, was as commissioner on the Hospital Costs Commission, appointed by Governor Grasso, for a five year term. He was serving this term at the time of his death.

Dr. Grendon held many other positions, including president and member of the Board of Directors of PSRO II, chairman of the Council of the Connecticut State Medical Society from 1973 until the time of his death, and speaker of the House of Delegates in 1977-1978. He was a delegate of the Connecticut State Medical Society to other state medical societies, delegate to the council of New England Medical Societies, president of the Hudson Valley Radiological Society, and a member of the National Council of Radiology, the American Medical Association, the Radiological Society of North America, the American College of Radiology and the Eastern Radiological Society.

He was dedicated to the service of the medical community in which he worked. The intelligence and objective thinking of which he gave so well and so faithfully, provided an example for us in our own efforts to serve a changing medical world.

Dr. Grendon leaves his wife, Mrs. Sarah Sachs Grendon and one brother, Alexander Grendon of San Francisco.

Frank Lovallo, M.D.

FROM THE EXECUTIVE DIRECTOR'S OFFICE

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Assistant Executive Director
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Timothy B. Norbeck
Executive Director

Josephine P. Lindquist
Associate Executive Director

Robert J. Brunell
Assistant Executive Director
Scientific Activities

Council Meeting

Wednesday, August 2, 1978

Attendance

Present were: Drs. Freedman, Kamens, James, Backhus, Spitz, Ragland, Jr., Friedberg, Hess, Bradley, Fabro, Canzonetti, Cramer, Van Syckle, McGarry, Sadowski, Anderson, Magram, Eslami, Krinsky, Zlotsky, Whalen, Beck, Shenker, Parrella, Tierney, Sonnen and Shepard.

Also present: Mrs. Wirth, Mrs. Harris, Mr. Tomat, Mrs. Lindquist, Mr. Sweeney, Mr. Brunell and Mr. Norbeck.

Absent were: Drs. Jameson, Rosenthal, Horrax, Harkins and Barrett.

In Memoriam

Before commencing the meeting, the Chairman of the Council, Andrew Canzonetti, M.D., asked the members to rise in a moment of silence in respect to the memory of David A. Grendon, M.D., who had passed away on July 7. Dr. Grendon was praised as a very courageous man who had served his profession and Society with distinction.

Approval of Minutes

It was VOTED to approve the minutes of the meeting of June 1, 1978 with one amendment on Page 4 in the Report of the President, item number 6 as follows: change words "in opposition to a motion" to "on the opposite side of a question."

Elections

In accordance with the Bylaws, Andrew J. Canzonetti, Vice-Chairman, automatically became Chairman of the Council replacing Dr. Grendon. The Council elected Dr. Guy W. Van Syckle as the new Vice-Chairman.

Under the Bylaws provision, Stuart A. Ragland, Jr., Vice-Speaker of the House of Delegates, automatically became Speaker replacing Dr. Grendon. The Council elected Charles M. Krinsky as the new Vice-Speaker to serve, according to the Bylaws, until the next regular meeting of the House of Delegates.

Appointments

David A. Grendon was the Society's representative on the Connecticut Commission on Hospitals and Health Care. The Council nominated the following physicians, one of whom will be appointed by Governor Grasso to replace Dr. Grendon:

Sidney L. Cramer, M.D., Hartford
Edward A. Kamens, M.D., Fairfield
Merrill B. Rubinow, M.D., Manchester

Reports From Physicians Serving on State and Federal Agencies

Orvan W. Hess reported on activities of Health Care Data of Connecticut, of which he is the new president, and the CSMS Committee on HSA's. Edward A. Kamens discussed the most recent meeting of the Statewide Health Coordinating Council. Andrew J. Canzonetti mentioned that the PSRO had been addressing itself of late to ancillary services, and E. Tremain Bradley reported that the effective and successful Community Based Cancer Program was running out due to a shortage of funds. The Council agreed that Dr. Bradley deserved a great deal of credit for his supportive efforts of the program.

Subcommittee on Administrative Organization and Planning

Guy W. Van Syckle reviewed the list of recommendations which had been disseminated to the Council. Amendments were suggested and approved to Items 3 and 5a, and it was VOTED to accept the report as follows:

1. It is essential that each County send a representative to the Meeting of the Subcommittee on Preliminary Studies of Nominations. Prior to the meeting the County representatives are urged to identify potential candidates from their counties and determine their committee interests, willingness to serve, and eligibility for membership on the State Committees.
2. The President of the Society, together with his appointed Delegates, shall monitor committee activities during the year.
3. Acting as Chairman of the Subcommittee Meeting, he will inform the members of the Subcommittee

Important data on the pain of acute cystitis:

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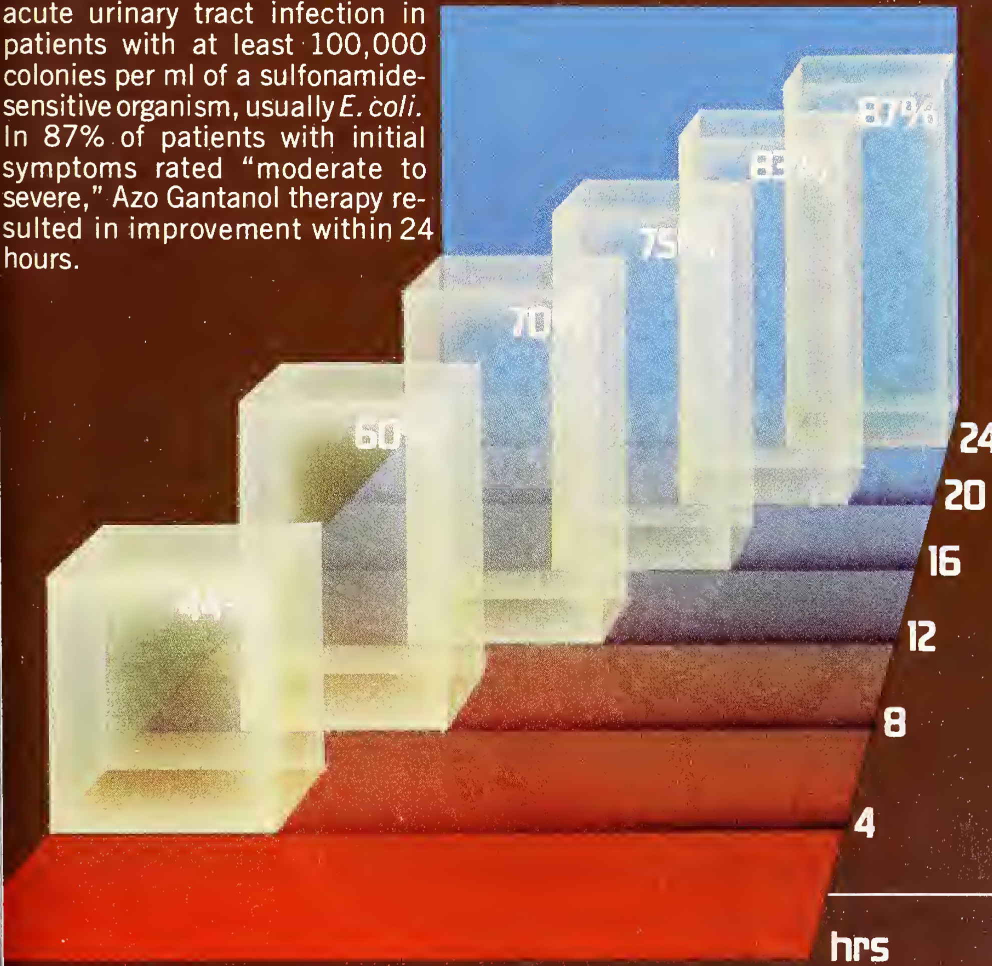

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Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

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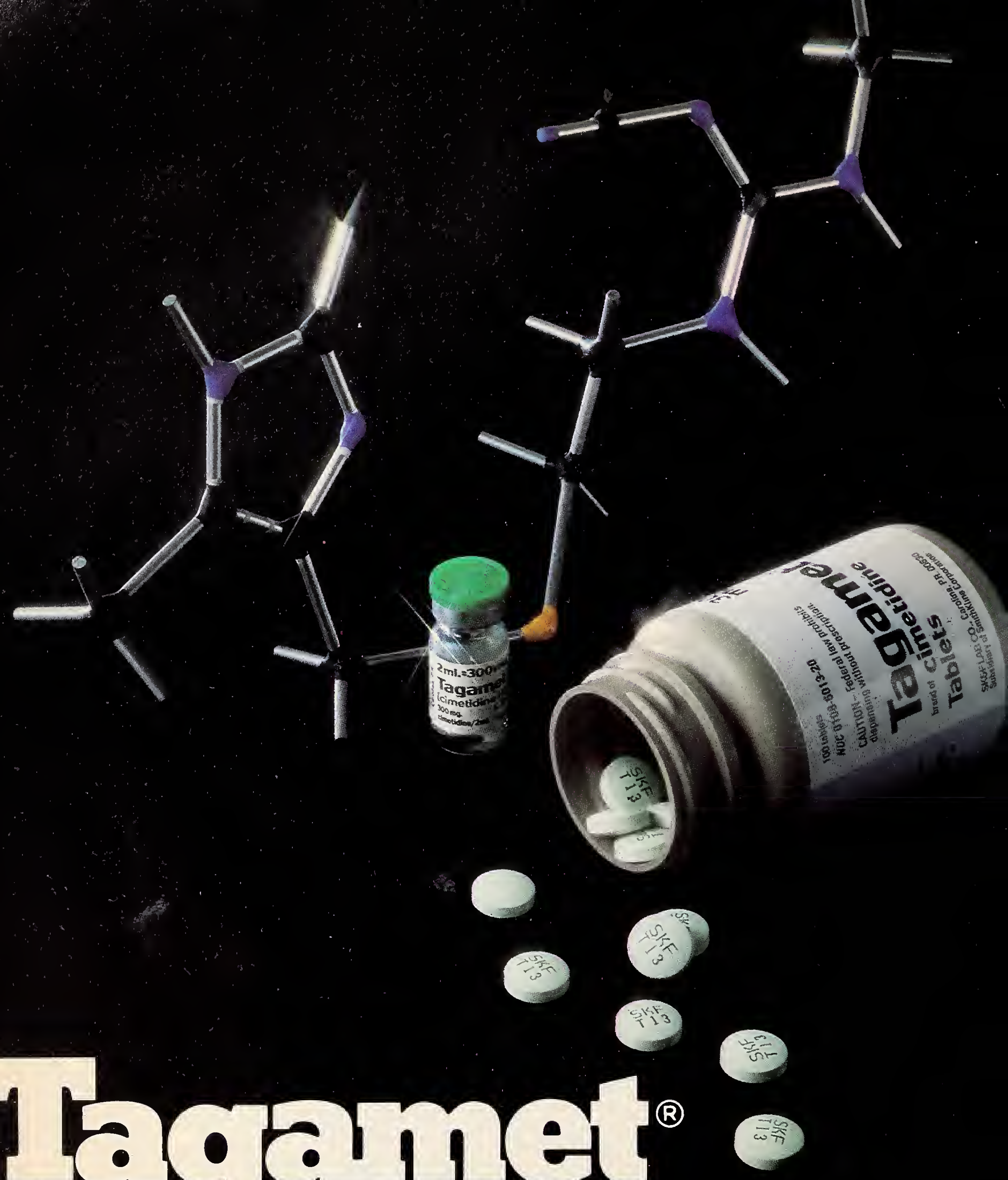

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of his evaluation of the status, the interim activities, and the needs for the forthcoming year of each CSMS committee. The Subcommittee shall give serious consideration to CSMS members who are not members of the Council when filling vacancies on the State Committees.

4. Members of the Council shall not serve on more than two standing State Medical Society committees as a voting member.
5. The following additions to our General orders are recommended:

(a) Committee Chairman:

  (1) No Committee Chairman shall serve more than 3 consecutive years as Chairman.
  (2) Any committee reports to the Council which recommend action shall be presented in person by the Chairman of the Committee or his Delegate.
  (3) He shall be prepared to testify as necessary regarding State legislation which interacts with his Committee activities.
  (4) He shall be prepared, if necessary, to amplify his Annual Report to the House of Delegates.
  (5) He shall insure that a Vice-Chairman and Secretary are chosen by the Committee at its first meeting.

(b) Committee Members:

  (1) All Members are expected to attend all meetings. Failure to attend at least 50% of the meetings, or three consecutive meetings without a valid excuse, will constitute resignation from the Committee.
  (2) Initial appointment to the Committee is made by the House of Delegates. Subsequent reappointment is made by the House of Delegates in consultation with the Chairman of the Committee.
  (3) Committee Members shall be prepared to testify as necessary as regarding state legislation which interacts with his committee activities.

Report on AMA Annual Convention (St. Louis, Mo., June 17-22, 1978)

J. Alfred Fabro and Sidney L. Cramer spoke briefly on the activities during the AMA Convention. The AMA report on the meeting was distributed to the Council and it was VOTED to receive same as information.

Mr. Norbeck reported on a letter received on August 1 from Dr. James Sammons of the AMA which requested comments from state societies as to the AMA legislative proposal (HR 1818) for national health insurance. It was pointed out that the CSMS House of Delegates had voted on April 27, 1977, to "endorse and approve the AMA's Comprehensive Health Care Insurance Act of 1977." It was VOTED unanimously to reaffirm endorsement of the AMA proposal.

Report of the President

1. *Leadership Committee of CHA and CSMS:* It was VOTED to receive as information the report of the meeting of the Joint Leadership Committee of the CHA and CSMS relative to future joint seminars.
2. *Voluntary Cost Containment:* It was VOTED to approve of an amendment to Paragraph 3 of the statement of purpose approved 6/1/78 pertaining to the voluntary cost containment program in Connecticut in order to properly acknowledge those cost containment goals which have already been achieved. The entire statement of purpose as amended reads as follows:

Statement of Purpose

The Joint Leadership Committee of CHA and CSMS will be designated as the Voluntary Cost Containment committee in Connecticut.

The Joint Leadership Committee represents the officers and other key physicians within CSMS as well as the Executive Committee of CHA. This committee had met several times and has discussed issues which are of interest to physicians and hospitals including hospital cost containment.

This committee has sponsored a series of seminars on the physicians' role in hospital cost containment. These seminars have promoted the establishment in each hospital of a physician cost containment committee and have also focused on utilization controls in specific ancillary service departments.

We believe that Connecticut hospitals and the Connecticut State Medical Society have already bettered the national goals of the voluntary cost containment program. Both the CSMS and the CHA shall continue an optimum effort, to reduce the escalation of costs and will continue to monitor mutually developments in cost containment.

3. *Certificate-of-Need Legislation:* It was VOTED to receive as information the President's correspondence with Senators Ribicoff and Weicker relating to the health planning amendments for extension of certificate-of-need legislation.
4. *Meeting with Deans of Medical Schools:* Dr. Freedman also reported on his meeting with Dr. Robert Berliner, Dean of Yale Medical School, Dr. Lawrence Pickett and Tim Norbeck, which included an overall discussion of issues of mutual concern.

Proposed Changes in the Bylaws

It was VOTED to approve of the proposed Bylaw changes as drafted by staff to reflect the actions taken by the Council at its meeting on June 1 and transmit to the House of Delegates for approval.

The Bylaw changes relate to simplifying approval of Life and Student Memberships; reducing the size of the quorum for Council meetings; and expediting and simplifying the acceptance of resignations and appointments to CSMS committees.

Fiscal Items

Request from Committee to Study Perinatal Morbidity and Mortality for Funding of the Society's Seventh Biennial Perinatal Seminar: It was VOTED to approve the expenditure of up to $500. to cover any deficits incurred by the subject program, which will be held on November 8, 1978 at the Yale-New Haven Medical Center. Similar commitments of support are being made by the state pediatric and ob-gyn organizations and a lesser degree of support is expected from the State Department of Health, the medical schools, and pharmaceutical firms.

Sales Tax Exemption: Dr. Spitz, Treasurer, informed the Council that efforts to retain the Society's sales tax exemption, which had recently been revoked by the Tax Department, have not been successful. It was VOTED that the Society begin to pay sales tax, but to do so under protest and that a letter to that effect be written to the State Tax Commissioner. It was further VOTED that the Chairman of the Council, President, President-Elect, Vice-President and staff be authorized to investigate the options offered by the Society's attorney as to what action should be taken to retain the sales tax exemption.

HEW's National Second Opinion Program for Medicare and Medicaid Patients

Several documents had been distributed to the Council on the subject and after a long discussion, which included comments by invited guest, Henry A. Archambault, M.D., Medical Director of Eastern Connecticut PSRO, the Council VOTED not to support the HEW Second Opinion Program at this time and to leave the matter of issuing a letter, advising HEW of the action, to the discretion of a committee comprised of the President, President-Elect, Vice-President, and Dr. Benjamin M. Shenker.

While there were concerns raised about non-participation in the program, Council members reiterated their support of the concept of second opinions approved by the HOD April, 1977, but objected to the inherent lack of information provided for in the program which would make it difficult if not impossible to evaluate. Members noted that in order to avoid costly duplication of tests and possible risk to the patient, the consultant should know that he or she is rendering a consultative service.

It was pointed out that the HEW program did not require such information; a failing which would prevent a fair and realistic review and evaluation. Other Council members objected to the use of PSROs as the government list holding agents for the program.

Proposed Public Health Council Regulation on Informed Consent

It was VOTED to receive as information the following proposed Public Health Council Regulation on Informed Consent which had been approved by the Public Health Council on June 28, 1978:

> It shall be the responsibility of each hospital to assure that the bylaws or rules and regulations of the medical staff include the requirement that, except in emergency situations, the responsible physician shall obtain proper informed consent as a prerequisite to any procedure or treatment for which it is appropriate and provide evidence of consent by a form signed by the patient or a written statement signed by the physician on the patient's hospital record.
>
> The extent of information to be supplied by the physician to the patient shall include the specific procedure or treatment, or both, the reasonably foreseeable risks, and reasonable alternatives for care or treatment.

Report of Delegate to Medical Society of New Jersey

It was VOTED to receive, as information, a report from Dr. Sidney L. Cramer, Hartford, on his attendance at the subject meeting in Atlantic City on May 6-9, 1978. It was further VOTED that two resolutions attached to the report be approved as Connecticut resolutions and referred as follows:

The first Resolution was on Professional Liability Insurance Coverage, which reads:

RESOLVED: That the Connecticut State Medical Society involve itself in the problem caused by inadequate insurance coverage for physicians who are acting in an administrative capacity in their hospitals, and resolve the inequity with the involved hospital insurance companies and medical liability carriers.

It was VOTED to refer this resolution to the Committee on Professional Liability for study and implementation.

The second Resolution was on Physician and Administrative Non-Medical Personnel Immunity, which reads:

RESOLVED: That the Connecticut State Medical Society support, develop or cause to be introduced legislation granting civil immunity to those non-physicians in peer review and administrative activities.

It was VOTED to refer this resolution to the Committee on Legislation for study and implementation.

It was also VOTED that the President, President-Elect, and Vice-President seek ways to promote the concept that members of CSMS simultaneously be members of the AMA.

Report on Seminar on British National Health Service, London, England, 5/12-17/78

It was VOTED to receive, as information, a brief summary form report from Dr. Orvan Hess, New Haven, on the subject meeting. The conclusions are as follows:

1. The British National Health Service, hailed as a success soon after its adoption in 1948, is failing to adequately meet public demand for health care both quantitatively and qualitatively. A Royal Commission and study groups considered this to be due to lack of sufficient funds to furnish necessary manpower and facilities and an inept management structure.
2. Criticism by the Public and the Profession became so intense in the past decade that it caused the Government to take corrective action.
3. Reorganization of the National Health Service and changes in the Administrative Structure (1974) have been effected with the hope for improvement.
4. Unless the financial inadequacies are resolved, drastic measures of retrenchment will be required. It is questioned whether the system would survive were it not for the unique character of the British Society.
5. The necessity for careful planning and assurance of sufficient funds *before* instituting a National Health Care System has been revealed.

Dr. Hess reported that a comprehensive report was being submitted for publication in Connecticut Medicine.

National Health Service Corps

At the request of the Society, Dr. Carl W. Johnson, Thompsonville, attended the National Health Service Corps Program Site Development Workshop on July 11, which was co-sponsored by the U.S. Public Health Service Region I and the Bureau of Health Planning and Development of the State of Connecticut. The National Health Service Corps program is primarily concerned in providing health manpower in areas deemed to have a shortage of such personnel. It was reported that in Connecticut the chief problem was not a shortage of medical manpower but one of maldistribution and that part of the HSA statewide planning was directed towards the correction of this maldistribution. At the present time there are 800 National Health Corps physicians in the field and it is expected that this number will increase to 1300 by September of 1979. There are 40 at present in Region I with 75 projected for the area. It was VOTED to receive Dr. Johnson's report as information.

Proposed Dates for Future Council Meetings

As an aid to Council members and county associations in planning their schedules, it was VOTED to schedule the following dates for Council meetings:

Thursday, September 28, 1978; Wednesday, December 13, 1978; Thursday, February 8, 1979; Wednesday, April 4, 1979; Thursday, June 7, 1979.

Semi-Annual Meeting for House of Delegates

It was VOTED to hold the Semi-Annual Meeting of the House of Delegates at the Ramada Inn, North Haven, on Thursday, November 16, 1978.

Connecticut Ambulatory Care Study

Dr. Hilliard Spitz, New London, Chairman, reported that a new chapter 9 of the Connecticut Ambulatory Care Study had been received from Dr. Donald Reidell. This chapter replaces the controversial chapter 10 previously submitted. It was VOTED that the Ad Hoc Committee which had written the critique on chapter 10 now be provided with copies of chapter 9 with the request that they review it and report back to the Council.

Committee on Statewide Medical Planning

It was also VOTED to approve the request of the Committee on Statewide Medical Planning to refer to various CSMS committees the following recommendations for study and report back to the CSWMP as to the feasibility of implementing any of these recommendations.

a. *Committee on Hospitals:* Through liaison with the Connecticut Hospital Association, investigate the establishment of administrative departments of Family Practice in every hospital in Connecticut.

   Committee on Hospitals: Through liaison with the Connecticut Hospital Association, seek to reach an agreement to support 36 positions in Family Practice, through attrition of other, superfluous positions, rather than through additional positions.

b. *Committee on Legislation:* Through liaison with the Connecticut legislature, establish a temporary 3-4 year fund support for the ambulatory component of a community hospital based training program in Family Practice.

c. *Committee on Third Party Payments:* Through liaison with third party payors, establish a permanent solution to the problems of support for the education of house staff in an office setting to begin when legislative support ceases.

It was further VOTED that the 3 committees (Hospitals, Third Party Payments and Legislation) and the Section on Family Practice working on Recommendation 37 of the Summary Report of the National Commission on Medical Care report back to the Council, through the Committee on Statewide Medical Planning, within two months.

Editorial Committee of Connecticut Medicine

At the request of the Editor, it was VOTED to add Dr. Edith Beck, Greenwich, and Dr. Howard Wetstone, Hartford, as members of the subject committee.

Reconstructive Surgery

It was brought to the attention of the Council that the Connecticut Statutes did not clearly distinguish reconstructive surgery from cosmetic surgery and this created difficulty in patients receiving reimbursement for such surgery. It was VOTED that the staff contact the Insurance Commissioner for advice on how to proceed with altering insurance companies positions in respect to reconstructive surgery.

David A. Grendon Memorial

A motion to name CSMS Financial Aid Fund for Medical Students the "David A. Grendon Financial Aid Fund. . . . " was referred to the President or a committee of his choice for study and deliberation on the suggestion.

Vote of Thanks

A vote of thanks was given to Dr. Canzonetti on the chairmanship of his first meeting.

N.B.: *The foregoing is a summary of the proceedings and actions of the Council on August 2, 1978. Detailed minutes of the meetings are on file at 160 St. Ronan Street, New Haven, for perusal by any interested member of the Society.*

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PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiry of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511 (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine* as space permits.

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

Office space available in beautiful Northwestern, Ct. Erdman Medical Building. Full or part time physicians needed in specialties not covered, Otolaryngology, Dermatology, Allergy and Gastroenterology. Contact Administrator, Sharon Medical Arts Center, Sharon, Ct. 06069. 203-364-5161.

EMERGENCY ROOM PHYSICIAN

Physician for Emergency Room of a modern hospital located in Putnam, Ct. 45 minutes from Providence, Hartford and Worcester. Full time, competitive salary, liberal benefits. Conn. license required. Call collect 203-928-6541. Charles F. Schneider, Exec. Dir., Day Kimball Hosp., 320 Pomfret St., Putnam, Ct. 06260.

Full time E.R. physician in 90 bed excellent community hospital. Contact C. Weeks, M.D., Emergency Dept., Sharon Hosp., Sharon, Ct. 06069.

Chief of Emergency and Ambulatory Care Services: Board eligibility or certification required, with two years of post-residency training in hands-on emergency care; experience in critical care medicine, including Trauma. Salary plus benefits. Location a long-time resort area, affords superb family living and recreation. Send resume in confidence to John F. Mirabito, Pres., Lawrence and Memorial Hosp., 365 Montauk Ave., New London, Ct. 06320. An equal Opportunity Employer M/F.

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Large Family Practice available, growing rapidly; no OB, small town Southeastern, Ct. Community hospital with privileges close by. House and office together directly on the water. Ideal set-up for professional woman and children. Contact CSMS-GDE.

We are near completion of a medical facility in town which will accommodate two physicians. Contact Shirley Martel, Plainfield Health Advisory Group, 8 Community Ave., Plainfield, Ct. 06374.

Family Practice. Professional Building. Excellent Opportunity. Louis Weiss, Lafayette Professional Bldg., 881 Lafayette Blvd., Bridgeport, Ct.

Excellent location for general practice. Servicing 20 to 25 thousand people. Rural setting between Fairfield County and New Haven and New York. 10 miles from Norwalk and Danbury Hospitals. Contact Bernard S. Unger, D.D.S., Georgetown, Ct.

Two to three Family Practitioners wanted. Contact Joyce U. Conroy, Conn. Department of Mental Health, 90 Washington St., Hartford, Ct. 203-566-4221 or 203-566-5493.

FAMILY PRACTICE—CONTINUED

Family Practice. Presently two man partnership looking for 3rd, in West Hartford, Ct. Office open 5 days a week and weekend call arranged. No OB. Contact Yale Gordon, M.D., 10 Princeton St., West Hartford, Ct. 06110.

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Connecticut Medicine

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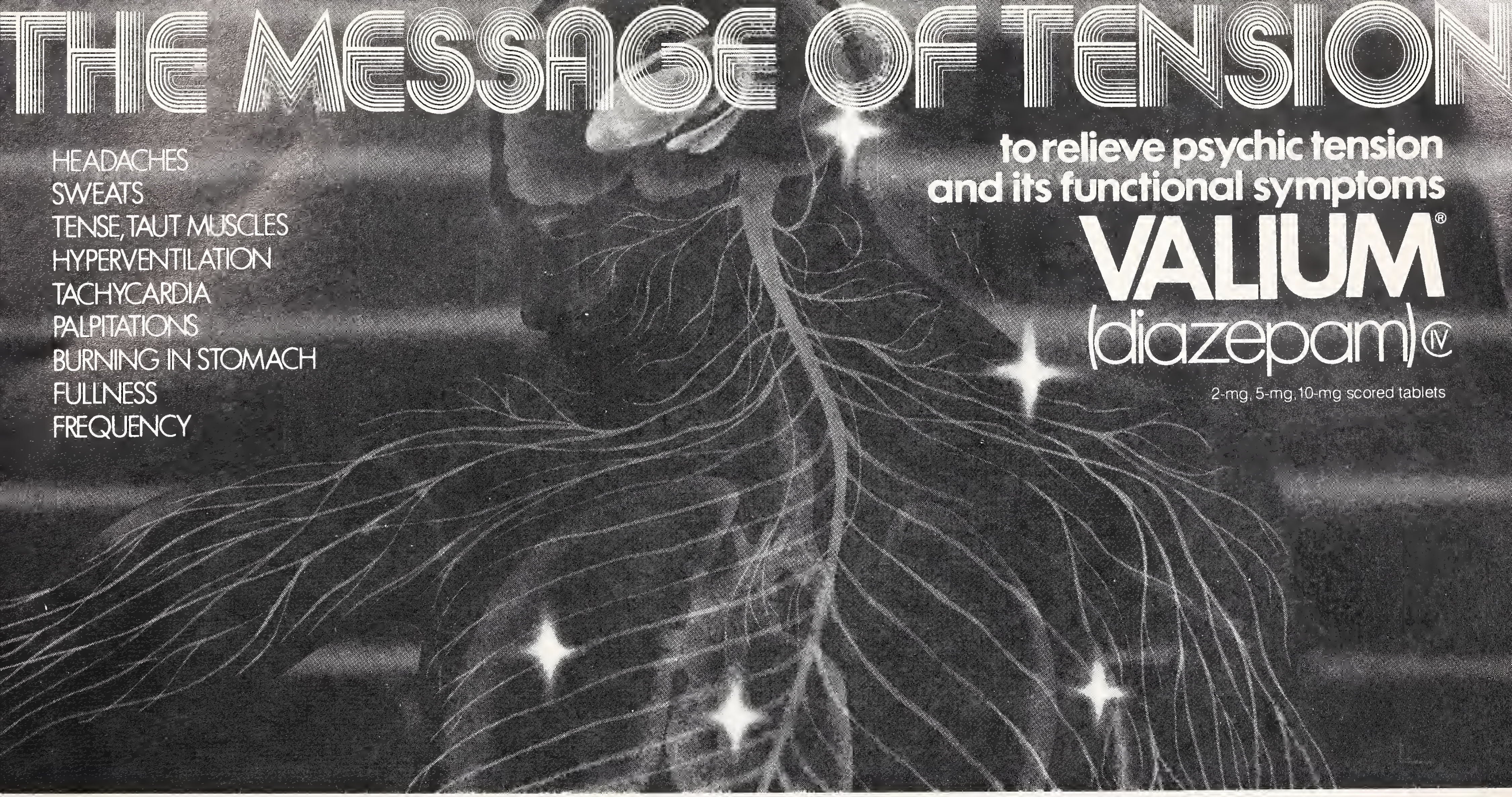

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The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the indi-

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predispos-

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
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Side Effects: Drowsiness, confusion, diplopia,

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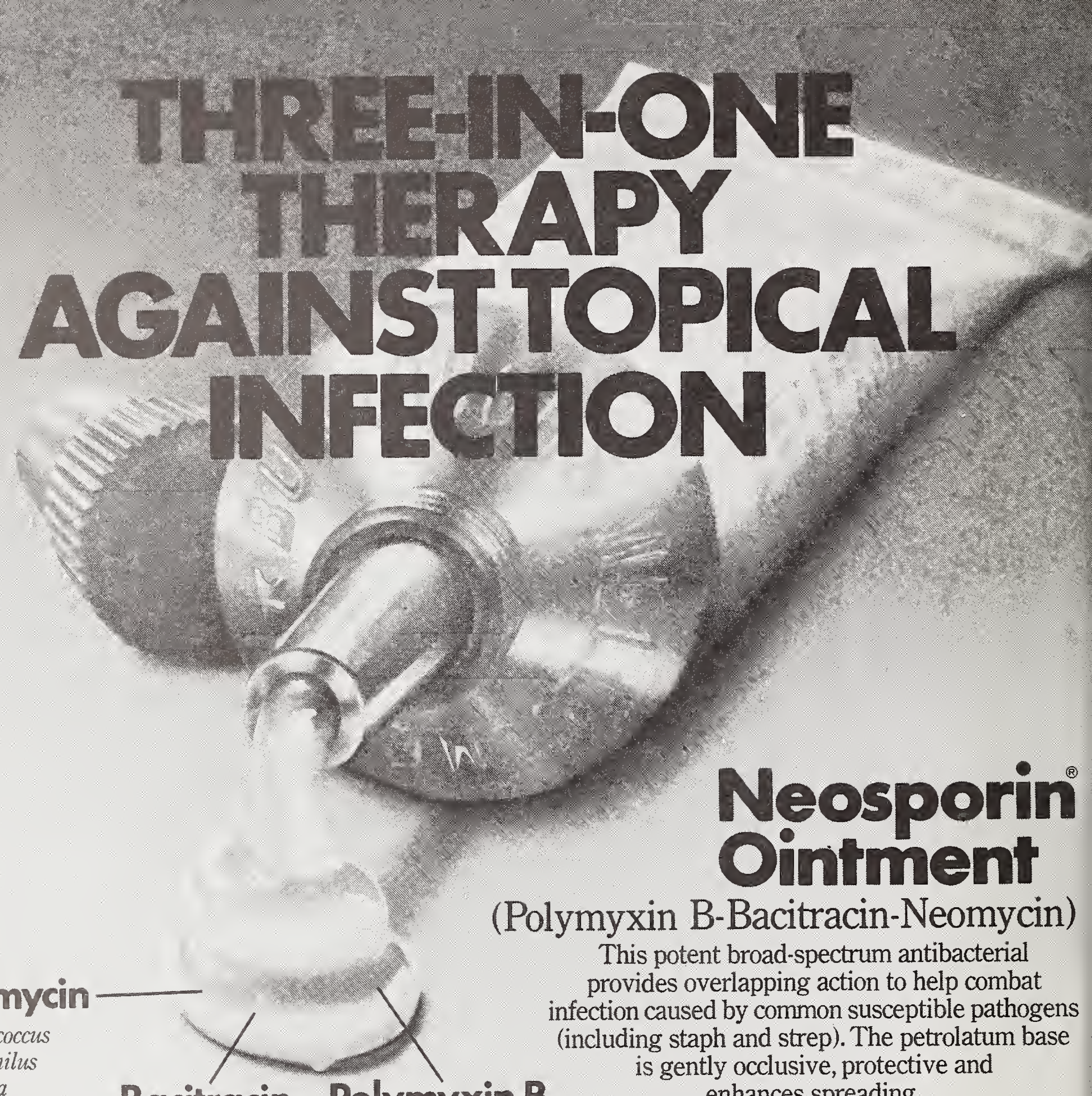

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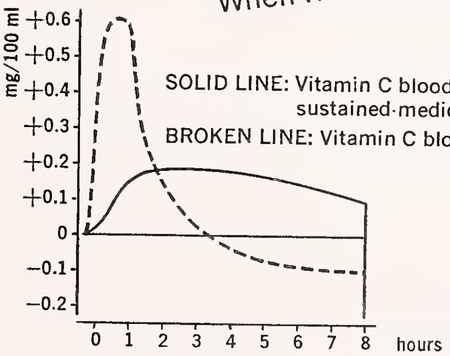

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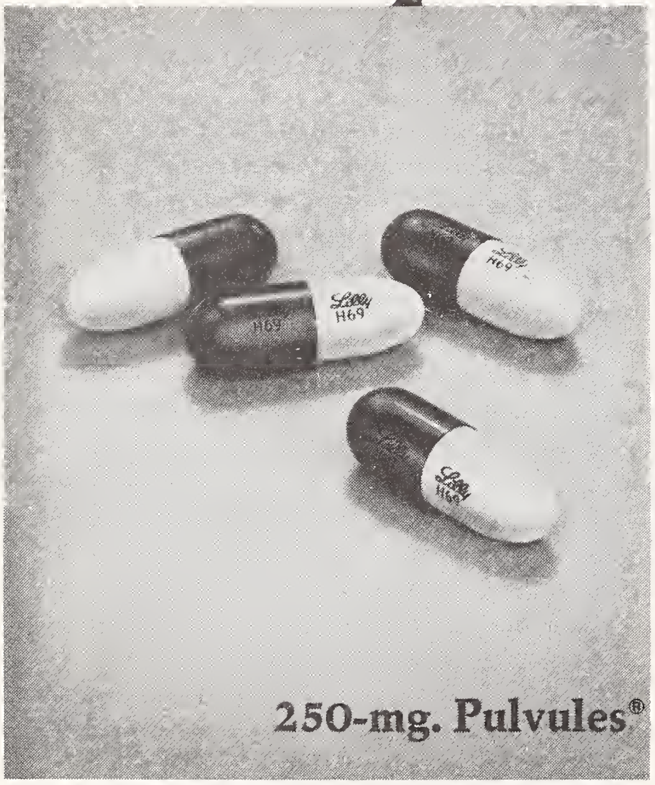

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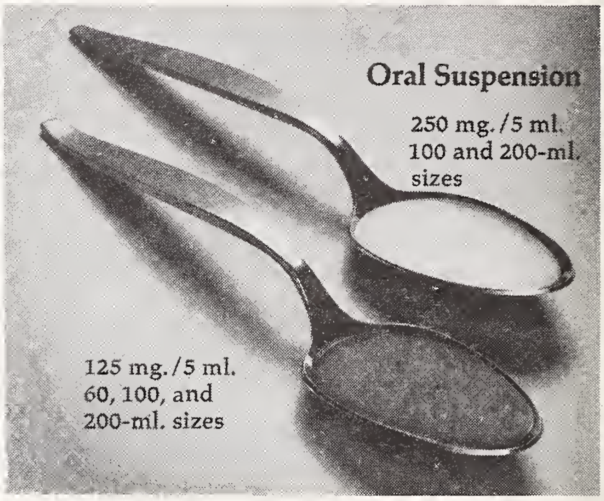

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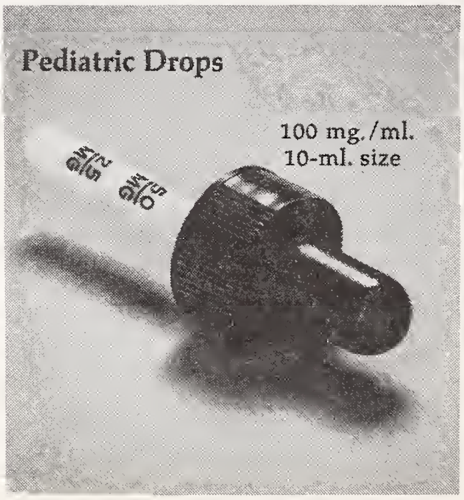

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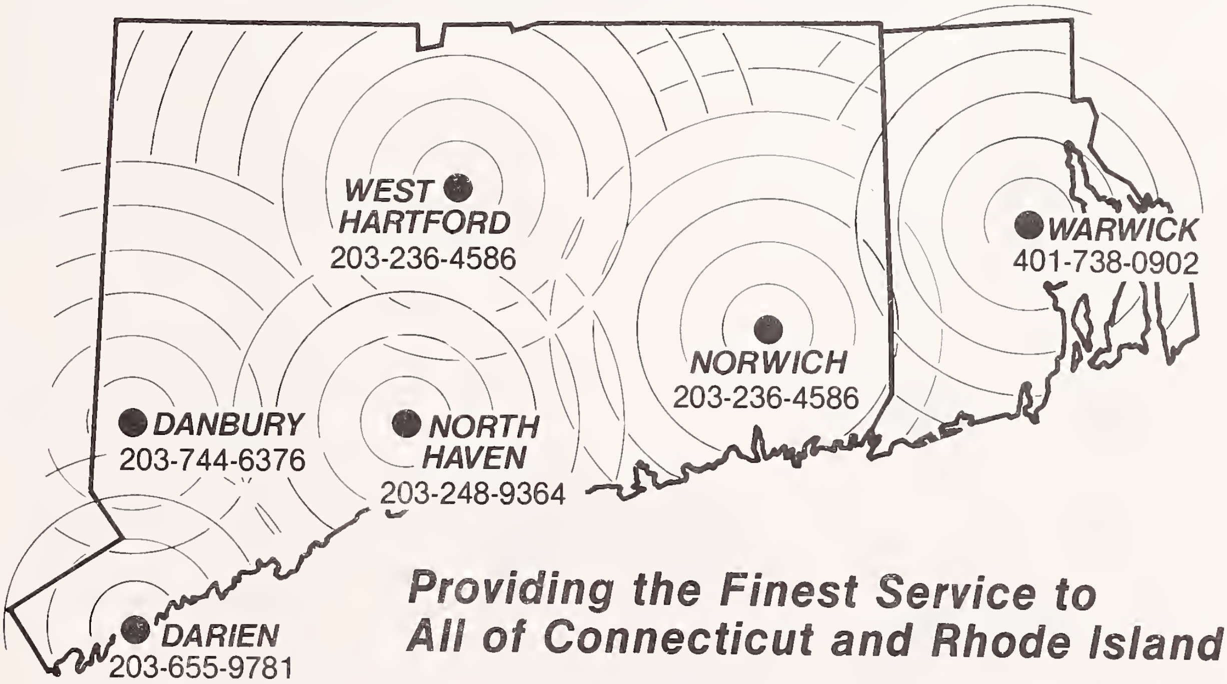

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Then we must consider the fact that there are non-medical costs attached to health care — labor, food, administration — and the biggest economic factor of them all, inflation.

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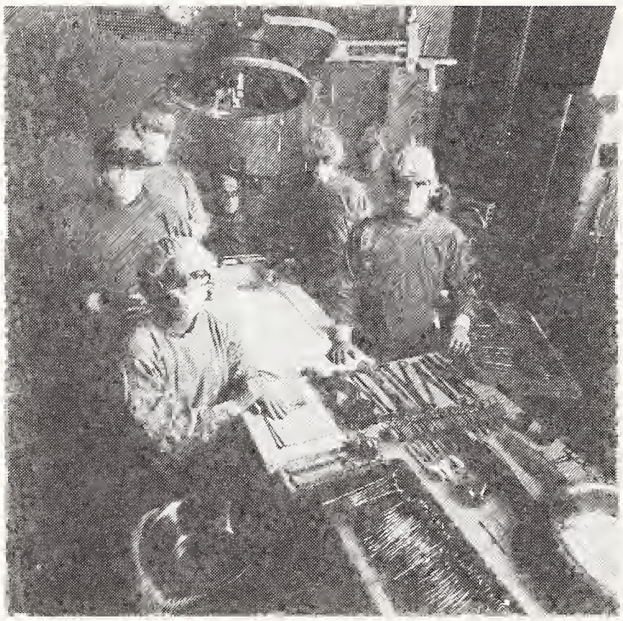

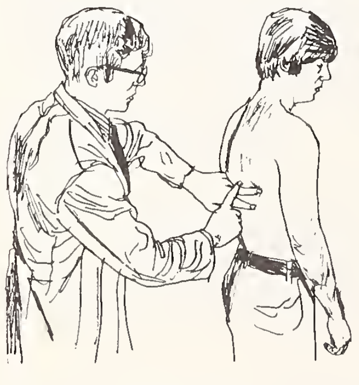

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Breast Cancer Today—Bright Searchlights and Old Riddles

SHERWIN B. NULAND, M.D., Guest Editor

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Out of sight of the windows of sense,
Old riddles still bid us defiance,
Old questions of Why and of Whence.

—William C.D. Whetham, in
The Recent Development of
Physical Science, 1904.

In the current atmosphere of turmoil and confusion that surrounds the treatment of breast cancer, many conflicting voices have been raised. As in all other conflicts in all other periods of our civilization some of the most strident of the voices are those of the least informed. But, as has also been true since the earliest dawn of our species, the least informed are often those whose lives are most effected by the outcome of the controversies.

Abstruse? Not at all. Our medical priesthood has passed along from generation to generation an ever-enlarging body of knowledge that has been meant to be ours alone. We have been instructed by our professional forebears to skim a bit off the top here and there, translate it into a comprehensible vernacular, and tell each patient what we think he or she needs to know. Above all, states our canon, admit to only minimal ignorance, and certainly avoid any occasional appearance of hopeless confusion. We are the censors of Information, of Knowledge and therefore of Wisdom. We have been taught by our own traditions that we are the only rightful censors of Choice.

Some of those traditions are no longer good enough. The enriching explosion of medical knowledge that we have witnessed in our time has been accompanied by an equally energizing outburst in the general level of education and awareness that our patients possess. It is an awareness not only of the surrounding store of knowledge, but of the basic human right to make informed decisions. This right and our profession's increasing sensitivity to it are reflected in the attitudes expressed by the authors of the four papers in this Symposium.

All of the articles have been written by physicians of vast clinical experience. Each is known as a recognized authority, but most importantly, as a clinician who is a direct and forthright exponent of particular points of view. In the various papers here presented these points of view may differ in significant respects, but there are certain basic unifying chords that run through all of them—the same unifying chords that characterize all valid contemporary studies of breast cancer.

These chords have to do with the realization that breast cancer is a systemic disease, a disease for which attempts at curative treatment based on the old concepts of surgical extirpation alone must be considered exercises in naiveté. They also have to do with a perception of axillary lymph node involvement as primarily a prognostic indicator and guide to further therapy, rather than simplistically as the next area of orderly progressive spread. The authors write of the usefulness of hormone-binding receptors in determining treatment plans and in predicting outcome; they write of vast areas of emerging knowledge, knowledge that the biometricians will clarify even more in the years to come; they write of new methods applied to old riddles. Above all, they write of the integrity of the body, of reconstruction and of hope.

The dogma of the older literature is missing. Our contributors tell of the alternate ways of dealing with common clinical issues, and they tell of choices—choices for the individual problems of individual human beings. Inherent in all of these papers is the unwritten "perhaps" or "it would seem indicated," pointing out plausible directions rather than insisting on rigid routes to cure. Out of the plausibilities and the indications each patient, with her doctor's help, should be encouraged to choose her way.

Breast cancer being treated three centuries ago—1978 marks the tricentennial of this illustration, which comes from "A Complete Treatise of Preternatural Tumours" by John Brown, Surgeon-in-Ordinary to Charles II, published in London in 1678.

What I sincerely hope is, that this Work will have a good effect in inducing others to exert their best efforts to pursue the subject with greater zeal and ability, and to attain the grand object which we ought always to have in view—to exercise our profession in the most scientific manner, and to do all in our power to diminish the evils and sufferings of humanity.

—Sir Astley Cooper, *The Anatomy and Diseases of the Breast* (1845).

Current Trends in Surgery for Breast Cancer

FRANK C. SPARKS, M.D.

Our goal as surgeons in treating women with Stage I and II breast cancer is to achieve local control and to "stage" the patient, i.e., remove lymph nodes to determine the risk of recurrence. The best method to achieve local control will be determined by a number of ongoing prospective randomized controlled studies which will be discussed subsequently. Clearly there is a trend away from radical mastectomy toward lesser operations and radiation therapy. Changing concepts of the biology of breast cancer have brought about new approaches to the treatment of the disease. A review of the biology of breast cancer is therefore an appropriate introduction to the treatment of the disease.

Biology of Breast Cancer

The concept of tumor-doubling time (TDT) is useful in understanding the clinical course of patients with breast cancer. Kusama[1] found a direct correlation between the TDT and the duration of survival after radical mastectomy. Gershon-Cohen[2] reported that the average TDT was 128 days in patients with negative axillary nodes, and 85 days in patients with positive axillary nodes.

A one centimeter "early" breast cancer contains 10^9 cells and has already undergone 30 of the 40 doublings that occur prior to the woman's death. The TDT of primary breast cancer varies from 23 to 209 days.[2] Multiplying the TDT times 30 doublings, we see that the one centimeter "early" breast cancer may have been present from 2 to 17 years prior to diagnosis. Despite the degree of accuracy in applying the TDT to such determinations, it seems reasonably certain that: A) months or years pass before a breast cancer can be diagnosed; B) metastases spread before the primary lesion is detectable; and C) the concept that "early" breast cancer is curable is probably wishful thinking.

The natural history of untreated breast cancer suggests that it is an acute or a chronic disease, depending upon the tumor-doubling time.[3] Daland[4] reported an average survival from first symptoms of 40 months in 100 untreated patients. Twenty-two percent were alive at the end of 5 years, and 5% after 10 years. This "chronic" form of breast cancer represents tumors with the longest TDTs. In contrast, about 20% of untreated cases survive less than one year from the first symptoms, and this fraction represents those tumors with the more rapid TDTs.

Contrary to previous beliefs that tumor cells spread in a step-wise fashion from the primary tumor to the lymph nodes, and then to distant sites, breast cancer can bypass lymph nodes and spread directly to the blood stream. Breast cancer can present as a metastasis.[5] Lymph nodes may act more as a marker of the patient-tumor relationship than as a barrier to tumor dissemination.

Microscopic or histological cancer does not always progress to clinical cancer. Although the pathologist can frequently find histological evidence of multiple lesions in the breast, the presence of two or more clinically apparent cancers in one breast is rare. Also, the incidence of cancer developing in the other breast is much lower than the incidence of histologic cancer detected by "mirror" image biopsy or autopsy. Finally, the incidence of tumor growing in untreated axillary nodes following total mastectomy is much lower than expected (see subsequent discussion).[6, 7]

Breast Cancer as a Systemic Disease

Breast cancer is a systemic disease at the time of first diagnosis in the great majority of women.[8] Only a small percentage of women may be fortunate enough to have the biological variant of breast cancer that does not metastasize and remains curable by operation alone.[9] Operations do not remove all of the cancer cells in the body, even in women who are "cured" of their disease.[10] Mueller[11] reported that in women with breast cancer, 80%-85% of eventual deaths are from the breast cancer, and the rate of

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dying is *constant* out to 15 years following operation. Because breast cancer is a systemic disease in the majority of women at the time of diagnosis, it is not surprising that varying the extent of operation, or adding one regional modality (radiation therapy) to another regional modality (operation), fails to increase survival.[12]

Local recurrence on the chest wall is a manifestation of systemic disease. Regardless of the treatment of the primary breast cancer, local recurrence and distant metastases grow simultaneously in almost all patients.[13] This observation serves to emphasize the importance of the patient-tumor relationship.[14] Alternative methods of controlling local recurrence, even in an irradiated field, are available and effective.[15]

THE TREND TO SMALLER OPERATIONS

Radical Mastectomy: Standard, Extended and Modified

Halsted saw patients with much more advanced breast cancer than we see today. In the case records from the Johns Hopkins Hospital he describes a woman with "a *small* 7 x 8 cm tumor in the upper outer quadrant."* To gain local control in such patients, radical mastectomy, frequently with skin grafting, was indeed necessary. Haagensen's results with the Halsted radical mastectomy[16] are a benchmark of what can be achieved by an experienced surgeon using careful clinical staging and operative technique.

When it became apparent that breast cancer spread to the internal mammary nodes, extended radical mastectomy was devised. In 1963 I believed that breast cancer was a localized or regional disease at diagnosis, and wanted to gain information that would support the use of this operation. I compared the results from radical mastectomy and extended radical mastectomy performed at the Memorial Sloan-Kettering and James Ewing Cancer Hospitals in New York City from 1953-1956. I reviewed all cases of primary operable breast cancer and selected only those cases with infiltrating duct carcinoma located in the inner quadrants or under the nipple. All cases in which there were any unfavorable signs were excluded. All patients had a complete 5-year follow-up. There was no advantage to resecting the internal mammary lymph nodes in these patients (Table 1). Analysis according to tumor size or lymph node level in the axilla also failed to show any advantage for the extended radical mastectomy. These data further support the concept that breast cancer is a systemic disease and that the regional lymph nodes are merely a marker for the patient-tumor relationship. Other studies support[17] [18] the efficacy of the extended radical mastectomy or fail to show any advantage.[19] [20]

Table 1

RESULTS AT FIVE YEARS

Status	*Radical Mastectomy* *No.*	*%*	*Extended Radical Mastectomy* *No.*	*%*
No Recurrence	245	59%	126	60%
Alive with CA	38	9%	22	10%
Dead	131	32%	62	30%

Comparison of standard radical mastectomy and extended radical mastectomy.

The modified radical mastectomy is more aptly termed total mastectomy and axillary dissection. The best study comparing the modified radical mastectomy and the radical mastectomy is from the Mayo Clinic, where data showed no difference in the local recurrence and survival rates.[21] The cosmetic and functional results from modified radical mastectomy are superior to those from radical mastectomy. Modified radical mastectomy is currently the most frequently performed operation for breast cancer because it achieves local control and removes axillary lymph nodes for accurate pathologic staging.

Total Mastectomy

Total mastectomy, with or without postoperative radiation therapy, has been evaluated in three prospective randomized controlled studies. From the early results, total mastectomy seems to be adequate primary therapy if followed by "radical" radiation therapy. In the National Surgical Adjuvant Breast Project (NSABP) study, patients with clinically positive nodes were randomized to either radical mastectomy or total mastectomy plus postoperative radiation therapy. Patients with clinically negative nodes were randomized to radical mastectomy, total mastectomy plus postoperative radiation therapy, or total mastectomy followed by axillary dissection in those patients who subsequently developed positive nodes. With a mean follow-up of 3 years (range 2-6 years), Fisher reports no significant difference in the treatment failure or survival rates.[6]

In the Kings-Cambridge trial,[7] patients with clinical Stage I and II breast cancer were randomly assigned to receive total mastectomy with or without postoperative radiation therapy. Axillary node dissection was not performed with simple mastectomy. In the group that was assigned to simple mastectomy alone, the axilla was treated only when evidence of progressive tumor growth occurred. There was no difference in the 5-year survival rates or distant recurrence-free rates. As expected, the local recurrence rate was lower in the group receiving radiation therapy.

In the Cardiff-St. Mary's trial,[22] patients with both clinical Stage I and II breast cancer were randomly assigned to receive either radical mastectomy or total mastectomy and pectoral node biopsy. Pectoral node biopsy was achieved by sampling the nodes which lie within the tail of the breast, and between it and the axillary vein. Postoperative radiation therapy was given to patients in both groups who had histologically positive nodes. There was no difference in the 9-year survival rates or distant recurrence-free rates. The local recurrence rate was lower in the radical mastectomy group.

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*Personal communication, Robert E. Herrmann, M.D.

What is the significance of clinically-negative histologically-positive axillary lymph nodes. Are they predecessors of distant metastases or merely a manifestation or marker for metastatic disease? Data from both the NSABP and King's-Cambridge trials suggest the latter. In the NSABP trial,[6] only 15% of women with clinical Stage I disease who were treated with total mastectomy alone have developed positive axillary nodes requiring a delayed axillary dissection. On the basis of findings in patients treated by radical mastectomy, as many as 40% of these patients had histologically positive nodes. In the King's-Cambridge trial,[7] only 14% of the women followed 4 or 5 years have required treatment to the axilla, whereas 32% would have been expected to have histologically positive nodes.

Partial Mastectomy and Radiation Therapy

The Guy's Hospital trial[23] evaluating partial mastectomy and radiation therapy is especially important, as it is the only study with a complete 10-year follow-up. Patients over 50 years of age with clinical Stage I and II breast cancer were randomly assigned to receive either wide local excision or radical mastectomy. Both groups of patients received radiation therapy, albeit less than would now be considered optimal. The survival rate for patients with Stage I disease was the same in both groups, whereas the survival rates for patients with Stage II disease was higher in patients treated by radical mastectomy. The local recurrence rate was higher in patients treated by wide local excision. In many instances the local recurrence could be adequately controlled by subsequent therapy.

Crile's data suggest that there may be a place for partial mastectomy without radiation therapy in carefully selected patients.[24] The NSABP is conducting a prospective randomized trial to test the validity of this concept.

Radiation Therapy

Local excision followed by radiation therapy with doses of 4500-5000 rads to the breast and regional nodes gives results that are comparable to those obtained with primary surgery.[25-28] The cosmetic results are superior to those obtained with a modified radical mastectomy. In my own experience with a small number of patients, the breast feels surprisingly normal. The side effects of radiation therapy must be considered. Rib or clavicle fracture, radiation pneumonitis, arm edema, pleural effusion and brachial plexus injury have all been reported.[25,26]

The long term carcinogenic effects of radiation therapy may be more important. I have personally performed forequarter amputations on two patients who have been "cured" of their primary cancer by radiation therapy, but who developed radiation-induced soft tissue sarcomas.

Barol[30] reported that the incidence of breast cancer was increased four times following irradiation of the breast. Bailar[31] examined the carcinogenic effects of mammography and concluded that there was "a possibility that the routine use of mammography in screening asymptomatic women may eventually take almost as many lives as it saves." If there is concern about mammograms causing breast cancer, there should certainly be concern about the use of therapeutic radiation therapy causing both breast cancer, osteogenic and soft tissue sarcomas.

Younger women are more likely to choose radiation therapy over mastectomy, especially if they have Stage I cancer. Mueller[32] reported a 60% twenty year survival rate for 1223 women with Stage I breast cancer who were under age 50 at the time of diagnosis. The latency period between radiation therapy for breast cancer and the onset of radiation-induced sarcomas varies from 5-24 years.[33] Thus the women most likely to choose radiation therapy are also those most likely to suffer from its long term effects.

The Importance of Staging on Adjuvant Therapy

The stage of the patient's breast cancer determines the treatment. The presence of histologically proved metastases in the axillary nodes is the best indicator of whether a patient will ultimately develop recurrence and succumb to her disease (Table 2). For pathologic Stage I disease (no evidence of metastases in regional nodes) adjuvant chemotherapy is not indicated.

For pathologic Stage II disease (metastases in regional nodes), the risk of recurrence is sufficiently high that many oncologists advise adjuvant chemotherapy, especially in premenopausal women.[36] The preliminary results from adjuvant chemotherapy are

Table 2

Involvement	*Recurrence*			*Survival*	
	18 months	*5 years*	*10 years*	*5 years*	*10 years*
			%		
Negative nodes	5	18	24	78	65
Positive nodes	33	65	76	46	25
Positive nodes (1-3)	13	50	64	62	38
Positive nodes (>3)	52	79	86	32	13
All patients	17	40	50	64	46

Effect of axillary lymph node involvement on recurrence and survival rates.*

*From Haskell *et al.*[41]

promising, in that the early recurrence rate is decreased,[36-40] and the survival rate increased.[39 40] Table 3 shows an update of our own results with adjuvant chemotherapy.[37-39] Contrary to Bonadonna's results,[40] the recurrence rate was lower in postmenopausal women.

If ongoing studies continue to document an improved survival with adjuvant chemotherapy, then accurate staging by axillary and/or internal mammary node dissection will continue to be an important and essential part of the primary treatment of breast carcinoma.

Table 3

RESULTS OF ADJUVANT THERAPY

	UCLA[1]	*Bonadonna*[2]	
	CMF + Immunotherapy	*CMF*	*Control*
No. Patients	94	207	179
Mean Follow-Up[3]	24 mo.	22 mo.	20 mo.
Recurrences			
Nodes			
1-3	9%	19%	38%
≥4	37%	42%	65%
Menopausal Status			
Pre	30%	15%	48%
Post	16%	36%	40%

1. Data as of January, 1978. For details, see references 37-39.
2. See reference 40.
3. Months after operation.

An Approach to the Individual Patient

Any woman with a dominant mass in her breast should have the mass either biopsied or aspirated. Aspiration frequently removes the need for biopsy and should be considered in every case. With adequate sedation and analgesics most biopsies can be done on an outpatient basis. The biopsy specimen should be cut up and part send for permanent section and part send for estradiol receptor assay if the diagnosis is cancer. The choice of laboratory studies to complete clinical staging prior to treatment is beyond the scope of this article.

Most women want to participate in the decision making process regarding their treatment. A discussion with the woman and her husband or an intimate friend is essential to help her reach an intelligent decision that she can live with. In order to make an informed choice, the woman needs to know about some of the concepts, if not actual clinical trials, described herein.

She should be told that the modified radical mastectomy is the standard operation throughout much of the United States, because it achieves good local control and gives accurate pathologic staging that can be used to assess the advisability of adjuvant chemotherapy. She can be reassured that she will almost certainly have complete use of her arm after this operation, little chance of edema, and that reconstruction is possible.

She should be told that there are alternatives to mastectomy, and that there is increasing evidence that the results with radiation therapy are comparable to those obtained with modified radical mastectomy. If a woman with clinical Stage I breast cancer wants to avoid mastectomy the survival data from the Guy's Hospital trial[23] is especially relevant, since it is the only study with a complete 10 year follow-up. She should also know of the promising results of adjuvant chemotherapy, and thus the importance of sampling the axillary nodes and, in selected cases, the internal mammary lymph nodes, to obtain accurate pathologic staging. This is especially important in premenopausal women who choose excisional biopsy and radiation therapy as primary treatment.

Finally, we should help the woman through both the medical and emotional aspects of her disease. The breast is not a useless, dispensible organ, but has great psycho-social value for today's women. In helping a woman reach an informed consent, we must remember that it is she who must live with or without her breast, with or without the carcinogenic effects of radiation therapy, and with or without the benefits and/or problems[35] of adjuvant chemotherapy.

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This natural obliquity of the mamilla, or nipple, forwards and outwards, with the slight turn of the nipple upwards, is one of the most beautiful provisions in nature, both for the mother and the child. To the mother, because the child rests upon her arm and lap in the most convenient position for sucking; for if the nipple and breast had projected directly forwards, the child must have been supported before her by the mother's hands in the most inconvenient and fatiguing position, instead of its reclining upon her side and arm. But it is wisely provided by nature, that when the child reposes upon its mother's arm, it has its mouth directly applied to the nipple, which is turned outwards to receive it; whilst the lower part of the breast forms a cushion upon which the cheek of the infant tranquilly reposes. Thus it is we have always to admire the simplicity, the beauty, and the utility, of these deviations of form in the construction of the body, which the imagination of man would lead him, á priori, to believe most symmetrical, natural and convenient.

—Sir Astley Cooper, *The Anatomy and Diseases of the Breast* (1845).

The Therapy of Advanced Breast Cancer

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Introduction

Breast cancer today is the commonest cancer of women. It afflicts 90,000 and kills 33,000 American women yearly. In spite of the multitude of articles comparing radical mastectomy to less extensive surgical approaches, it is becoming apparent that in most cases breast cancer is not a local disease and hence local therapy will not suffice.[1] It is the systemic therapies, like chemotherapy, hormonal manipulation and perhaps immunotherapy, that may prolong life and provide cures.

While great progress has been made in recent years with new single agents and multimodality therapy, the field is in great ferment and no therapeutic program is truly "standard treatment." In evaluating the many reports of results, it is becoming clear that responses must be related to both the extent of tumor (mass) and its critical location. The work of Skipper and associates,[2] Schabel,[3] and others has demonstrated in animals that better response rates correlate well with a smaller tumor burden, and that micrometastases are potentially curable. Studies in progress are exploring the applicability of these findings to humans. In addition, soft tissue tumor metastases appear to respond more readily than either osseous metastases or visceral metastases. Accordingly, optimal therapy requires a careful assessment of the extent and location of the neoplastic tissue.[4]

Workup

Whatever surgical approach is used, (total mastectomy, modified radical mastectomy or conventional Halsted radical mastectomy), it should include an axillary clean-out to evaluate nodal involvement as well as to reduce the incidence of local axillary recurrence.[5] Tumor tissue should be tested for estrogen and progesterone receptors. In addition, a bone scan, liver scan and a tumor-associated-antigen level in the blood (carcinoembryonic antigen-CEA) should be obtained as a baseline. It is presumed that chest X-ray, CBC, platelet count and a biochemical profile were obtained prior to mastectomy. Bone X-rays, brain scan and CT scan should only be obtained if symptoms or clinical signs suggest their utility.

Single Agent Chemotherapy

A great many drugs have been tried as single agents in the treatment of disseminated breast carcinoma.[6, 7] The most effective single agent is adriamycin with reported responses ranging from 13% to 100% in various series but averaging about 40%.[1] Table I shows the average responses for the more common single agents as reported by many authors using slightly different doses and durations of therapy.[1, 6, 7, 8]

Table I

Major Drugs	*Evaluable*	*Response*
Adriamycin	881	40%
Cyclophosphamide	529	34%
Methotrexate	356	34%
5-Fluorouracil	1,236	26%
Melphalan	86	23%
Vincristine	226	21%
Minor Drugs		
Mitomycin	60	38%
Hexamethylmelamine	39	30%
Dibromodulcitol	22	27%
BCNU	76	21%
Vinblastine	96	20%
CCNU	155	12%
Actinomycin-D	44	11%
Methyl-CCNU	33	6%

(modified from 1, 6, 7)

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Combination Chemotherapy

Although respectable remissions with increased survival were associated with single agents, the incidence of response has increased dramatically with combination therapy. Beginning in 1964, combination therapy received a major boost with the report of 90% response rates by Richard Cooper in 1969 with a 5 drug combination of cyclophosphamide, methotrexate, fluorouracil, vincristine and prednisone.[9] [10] Although other investigations were only able to get response rates of 50% to 65%, these are consistently better than single agents.[4]

From a large number of studies, it now seems that response rates with five drugs and four drugs are equal and probably not significantly better than the most active three-drug regimens, CMF (cyclophosphamide, methotrexate and fluorouracil) or FAC (fluorouracil, adriamycin and cyclophosphamide), or even the better two-drug regimens, cyclophosphamide-adriamycin and adriamycin-vincristine.

With the currently available chemotherapy regimens, responders survive more than twice the time that nonresponders do. Surprisingly, survival with combinations is only very slightly better than with single agents. Thus, we seem to have reached a plateau.[1] Accordingly, single agents and combinations are being tried adding immunologically active agents, hormones or anti-hormones.

Preliminary reports of the studies still in progress suggest that hormono-chemotherapy looks very promising. Perhaps even more hopeful is combination adjuvant chemotherapy designed to destroy micrometastases in order to achieve cures.[11]

Surgical Adjuvant Therapy of Breast Cancer

Despite recent changes in surgical and radiation therapy techniques the mortality rate for breast cancer has remained relatively constant for the past 40 years. From the magnitude of the disease with its high morbidity, the need for additional therapy in the majority of women becomes obvious. Surgical adjuvant studies have utilized radiation, oophorectomy, peri-operative chemotherapy, and now single drug and combination chemotherapy for 1-2 years post-operatively.

Historical data from Bernard Fisher on recurrence rates in breast cancer have shown that axillary node status at the time of mastectomy is a useful predictor of recurrent disease. Patients with no positive axillary nodes at the time of surgery have a local and distant recurrence rate of 21% at 5 years and 24% at 10 years; with 1-3 positive nodes the recurrences are 53% and 65% at 5 and 10 years, and with 4 or more nodes there is an 80% chance of recurrence at 5 years and 86% at 10 years.[12] Once a recurrence has occurred in breast cancer, patients will eventually succumb to their disease. The need for adjuvant therapy in patients with breast cancer has evolved from this data.

Radiation

The value of post-operative adjuvant radiation therapy has been controversial. However, Stjernsward[13] has evaluated 6 controlled trials including the National Surgical Adjuvant Breast Project (NSABP) trial[14] and found that 5 year survival in women receiving post-operative radiation for breast cancer is 1-10% lower than the non-irradiated groups. In all radiation therapy studies local recurrences following radiation are diminished. However, irradiated patients are dying of distant metastases at the same or perhaps a higher rate.[13] In addition to being of no proven benefit to patient survival, post-operative radiation may potentially diminish the bone marrow tolerance to systemic chemotherapy.[15]

Prophylactic Oophorectomy

The value of prophylactic oophorectomy as an adjuvant to radical mastectomy in pre-menopausal women was studied by the NSABP. The conclusions of their study were that oophorectomy, at the time of mastectomy, did neither decrease the time to recurrence nor increase survival when compared to a control population, and there is no justification for this operation in the treatment of operable breast cancer.[16]

Chemotherapy

The use of chemotherapy as an adjunct to surgery stems from Schabel's hypothesis that micrometastases, by virtue of a higher growth fraction, would be more sensitive than bulky tumor to cell-cycle specific drugs.[3] Adjuvant chemotherapy following radical mastectomy has come to prominence recently following the publications of Fisher[17] and Bonadonna.[11] However, as early as 1957, the NSABP was using thio-TEPA as an adjunct to radical mastectomy.[18] In the NSABP study with thio-TEPA, the drug was administered only on the day of surgery and for 2 days post-operatively. In comparing control and thio-TEPA groups there were no overall differences in survival. However, in pre-menopausal women with 4 or more positive nodes, the thio-TEPA treated group had a 21% lower recurrence rate at 5 years, a difference which has persisted out to 10 years. Utilizing information gained from the early studies, a recently published NSABP program[17] has utilized a more intensive course of therapy, melphalan 0.15mg/kg orally for 5 days every 6 weeks for 2 years. The results of this study have shown a lower relapse rate (9.7%) for the melphalan treated group when compared to the placebo group (22%). In dividing the patient population into pre-menopausal (≤ 49 years old) and post-menopausal (≥ 50 years old) patients, pre-menopausal women on melphalan with both 1-3 and 4 or more positive nodes had an advantage over placebo treated women in regard to disease free interval. However, this was statistically significant only in those with 1-3 nodes. In post-menopausal women melphalan has decreased relapse rates at 1 year of follow-up, but this difference does not persist at 2 years.[19]

In advanced breast cancer, multiple drug chemotherapy is superior to single agent therapy in regards to response rate and duration of response. For this reason, Bonadonna[11] used a combination of CMF for a period of 1 year as an adjunct to the treatment of operable breast cancer. As in Fisher's adjuvant study[17] a significant advantage was noted for the treated group over the untreated group (5.3% vs 24% failure rate at 27 months of followup). Initially both the pre and post-menopausal treated groups showed a better disease free interval.[11] The most recent update of these results[20] shows continued significant benefit for treated pre-menopausal women with both 1-3, and 4 or more nodes involved. There is, however, no advantage for post-menopausal women in either nodal category.

Despite the encouraging results obtained in these two adjuvant chemotherapy studies it must be recognized that breast cancer is a chronic disease with relapses occurring as late as 20 years after initial mastectomy, and it remains to be seen whether treatment is only delaying relapse. Additionally, these treatments are not without side effects. In the CMF series[11] leukopenia and thrombopenia occurred in 71%, nausea and vomiting in the majority, alopecia in 55% and amenorrhea in 54% of pre-menopausal women. The toxicity of melphalan was milder and consisted of leukopenia in all and nausea or vomiting in 30%.[7] The delayed side effects in terms of second malignancies of these two programs are not as yet known. However, in patients with multiple myeloma treated with alkylating agents there is a higher incidence of acute leukemia.[21]

In addition to these two reported surgical adjuvant studies, many other trials comparing different drug combinations are presently under investigation. At this juncture in time, recognizing the poor natural history of breast cancer with axillary node involvement at surgery, and the good initial results obtained with adjuvant chemotherapy, it would appear prudent to begin all pre-menopausal women with involved nodes on a program of adjuvant chemotherapy. In post-menopausal women with nodes involved, enthusiasm for adjuvant chemotherapy is more tempered.

The Hormonal Therapy of Advanced Breast Cancer

It has been observed that approximately 20% to 40% of women with advanced breast cancer will have objective evidence of tumor regression when they are treated with ablative endocrine procedures (oophorectomy, adrenalectomy, hypophysectomy), or with exogenous hormones (estrogens, androgens, anti-estrogens, progestigens, glucocorticoids). Historically, the choice of therapy was often based on menopausal status, disease-free interval following mastectomy, site of dominant disease and response to prior endocrine treatment. While many theories have been advanced to explain the observed responses to either ablative or additive hormonal therapy, no one theory can adequately explain all observed responses to endocrine manipulation. A start in this direction has been made by studies of hormone-binding receptors which are now readily available to the clinician and afford a reliable guide as to the initial strategy that should be taken in the woman with advanced breast cancer.

Hormone Binding Receptors

Receptors are responsible for the initial interaction between a hormone and a cell, and serve to trigger a biochemical chain of events characteristic to that particular hormone and its target cell. All normal target tissues including normal breast glandular tissue contain specific receptors for hormones. The number of hormone binding receptor sites can be measured in vitro specifically for estrogens (hence, the term estrogen binding receptors, EBR), androgens (androgen binding receptors), progesterone (progesterone binding receptors, PgR) and glucocorticoids.

Post-menopausal patients have a greater incidence of EBR positivity in both the primary tumor and in metastases than do pre or peri-menopausal patients.[22 23] Within EBR positive groups, post-menopausal patients have a higher median EBR level than do pre-menopausal patients.[23 24] There is no correlation between the absolute EBR value in the EBR positive group, and the predictability of response or the duration of that response.[24] In addition, the presence of both the EBR and PgR predicts for a higher chance of responsiveness to endocrine therapy than EBR positive but PgR negative tumors.[26]

The Hormonal Management of Advanced Breast Cancer

In general, an endocrine manipulation is performed first in the patient with EBR positivity and metastatic disease. A 12-week span is allowed from the time of initiation of an endocrine maneuver before considering it a failure. Several exceptions to this 3-month trial period exist. The patient with advanced liver metastases or advanced pleuropulmonary metastases should receive chemotherapy as first line treatment because the potential time to objective tumor regression is short and because the survival of such patients is often less than 12 weeks. Patients with isolated central nervous system metastases should receive cranial irradiation as both systemic chemotherapy and endocrine manipulations do not affect the course of CNS metastatic disease.

Pre-menopausal Women

The endocrine treatment of choice in the pre-menopausal patient with metastatic breast cancer is castration by bilateral oophorectomy. Therapeutic castration may be carried out by surgery or by radiation. The advantage of surgical oophorectomy is that the major source of endogenous estrogens is removed immediately while with radiation it may take as long as 3 to 5 months before estrogen levels fall fully.

The incidence of tumor regression by surgical castration is 25-35% in older series (pre-EBR assays) with a median response duration of 9-14 months.[27] [28] Responding patients clearly live longer than non-responding patients. If the tumor is known to contain EBR activity, there is a 55-65% likelihood of response to oophorectomy. If EBR activity is absent, the chance of tumor regression occurring is less than 10% following castration. It seems reasonably well-settled that the initial therapy in the pre-menopausal patient with recurrent disease (if EBR positive) is ovarian ablation, and that the patient with a prolonged ovarian ablation response should undergo hypophysectomy or adrenalectomy upon relapse. The best therapy for the oophorectomy non-responder or pre-menopausal EBR negative patient is unknown. Occasional responses have been documented following hypophysectomy, adrenalectomy or androgen therapy but no prospective randomized trials are available to answer the question. Many oncologists would utilize chemotherapy for this group.

Post-menopausal Women

The treatment of choice in post-menopausal patients with advanced breast cancer is additive therapy, usually the administration of exogenous estrogens or anti-estrogens. There is no question that in patients more than 5 years post-menopausal, the overall results of estrogen therapy are superior to those of androgen therapy (31-37% remission rates for estrogens vs 15-21% remission rates for androgens) except for bone metastases where androgen therapy is superior.[28] [30] The average remission duration from estrogen is 16 months vs 11 months for androgens.[29] In addition, prolonged patient survival is associated with a favorable response to estrogen therapy.[29]

Approximately 55-65% of EBR positive post-menopausal patients will respond to additive therapy while less than 12% of EBR negative post-menopausal patients will respond. Patients who have responded to estrogens and then relapsed (in the absence of life-threatening or rapidly progressing disease) can be followed for an estrogen withdrawal response.[29] [31] Such a response may last from 10 to 20 months.

For the post-menopausal patient who has responded to estrogens or to androgens as first line therapy, the other hormone can be tried after waiting for an estrogen or androgen withdrawal response. A 22-30% response rate to androgens has been noted in previous estrogen responders,[30] while a 20% response rate to estrogens has been noted in prior androgen responders.[29] Combination estrogens and androgens have been used together as first line therapy but results are no better than with estrogens alone.[32]

Ablative therapy (hypophysectomy or adrenalectomy) may be attempted in the post-menopausal patient who has responded to additive therapy. Ablative therapy is unlikely to work in an estrogen or androgen non-responder. Whether the EBR positive post-menopausal patient would benefit by first having ablative therapy rather than traditional additive therapy is not known.

Peri-menopausal Women

Women within 1-2 years of the menopause have been a difficult group in terms of determining the best modality of therapy. Much of the confusion in older studies related to the inability of the clinician to determine whether ovarian function was intact. Follicle stimulating hormone and luteinizing hormone measurements have aided somewhat in this determination. It is unclear in the EBR positive patient what hormonal manipulation is indicated, while EBR negative patients probably should receive systemic chemotherapy.

Newer Developments in Hormonal Therapy

In a general sense, all compounds which are capable of blocking estrogenic effects may be called antiestrogens. The non-steroidal compounds tamoxifen, nafoxidine and clomiphene appear to antagonize the effects of 17B-estradiol by preventing its binding to target tissues through depletion of cytoplasmic receptors.[33]

Tamoxifen citrate (Nolvadex®), a triphenylethylene derivative, has undergone extensive trials as an oral hormonal form of therapy in patients with breast cancer.[33] [35] Response to tamoxifen in United States clinical trials involving 305 evaluable patients (mostly post-menopausal) with advanced breast cancer has revealed an overall objective response rate of 40% (121/305). The response to tamoxifen in relation to EBR analysis has been assessed in 112 patients. Two of 24 (8%) patients who were EBR negative responded to tamoxifen as opposed to 44 of 87 (50%) patients who were EBR positive. (One patient with borderline EBR value did not respond.)

Adverse effects from tamoxifen are minimal and include hot flashes, nausea, vomiting, transient leukopenia and thrombocytopenia and vaginal spotting. Tamoxifen appears to be somewhat better tolerated than the conventional exogenous estrogens, to have at least equal efficacy in post-menopausal patients with advanced breast cancer, and to have less side effects than nafoxidine and clomiphene.

Medical Adrenalectomy

Tumor regression rates following surgical adrenalectomy vary from 20% to 50% depending upon the selectivity of the patient populations, prior response to hormonal manipulation, menopausal status and site of dominant disease.[36] Since many patients with advanced disease are poor operative risks, medical ablation of adrenal steroidogenesis would remove the need for major surgery and could be potentially applied to a larger group of patients. Aminoglutethimide (Elipten®, a derivative of the hypnotic glutethimide (Doriden®), blocks adrenal steroidogenesis by inhibiting the enzymatic conversion of cholesterol to pregneneolone.[37]

Clinical experience with aminoglutethimide has revealed a 25% to 38% objective remission rate in patients with metastatic breast cancer.[38] For populations of patients where EBR status was not determined as a routine, initial response rates appear strikingly similar to those achieved with surgical adrenalectomy series. Side effects of aminoglutethimide have included dose dependent lethargy, ataxia, dizziness and nystagmus, transient drug rash and drug fever, and hypoadrenalism (counteracted by exogenous steroid administration).[38] [39] Side effects, although common during the first few weeks of drug administration, often remit. Aminoglutethimide appears to be well-tolerated with chronic administration.

Summary

New approaches to the management of cancer of the female breast have led to the hope that we can achieve better survival with acceptable side effects. Combination chemotherapy yields a higher rate of remissions and responders live twice as long as nonresponders. Adjuvant chemotherapy in the premenopausal female has increased the disease free interval to a highly statistically significant degree. There is an increase in the disease-free interval in the post-menopausal patient, but it is not statistically significant. The availability of hormone-binding receptor tests helps in predicting response to therapy and thereby aids in selection of treatment options to maximize response and minimize toxicity. The new antiestrogens add a new and less toxic hormonal tool. The availability of aminoglutethimide suggests the possibility of medical ablative therapy which may be safer, easier and cheaper than surgical ablations. The combination of these new tools should herald significant progress in the therapy of female breast cancer.

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Radiation Therapy as Initial Treatment for Breast Cancer: Is Mastectomy Necessary?

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Cancer of the breast remains the commonest form of cancer in women, with approximately 90,000 new cases annually in the United States. It is also undoubtedly the most controversial cancer in terms of management and can usually be counted on to cause a good fight when surgeons, radiotherapists and medical oncologists get together. This paper will probably add to the controversy.

Several leading investigators have correctly emphasized in recent years that breast cancer is often a systemic disease.[1] [2] The ability to make substantial progress in the overall cure of breast cancer is dependent on having effective systemic treatment. There is very little evidence to suggest that any type of local treatment has a *great* advantage over any other type—that is, radical mastectomy, modified radical mastectomy, total mastectomy, etc. all seem to result in equal survival statistics, when large numbers of breast cancer patients are considered as a whole. Nevertheless, the type of local treatment makes a great deal of difference to the patient in terms of her emotional well-being and overall quality of life.

Evidence is now accumulating from our own institution as well as a number of other centers that radiation therapy to the intact breast and draining lymph nodes combined with surgical removal of the mass ("lumpectomy," excisional biopsy, partial mastectomy) results in an equivalent cure rate to more conventional procedures such as radical or modified radical mastectomy. In a skilled radiotherapists' hands, using proper equipment, the cosmetic results are excellent and the overall morbidity from treatment minimal.

Background and Biology

The role of radiotherapy in the management of locally advanced breast cancer and metastatic disease has been recognized for a long time. As well known a proponent of radical mastectomy as Haagensen stated in his textbook 20 years ago that patients with any one of five "grave" signs of disease should not have a mastectomy but do better with radiotherapy alone.[3] This was later extended to include patients with clinically small disease but positive biopsies from the apex of the axilla and/or the internal mammary nodes. Such patients were treated by Ruth Guttmann with radiation alone with a 30% 5-year survival in advanced disease (stage III) and a 50% 5-year survival in patients rejected for surgery because of positive node biopsies.[4] One might ask: if radiotherapy is so successful (relatively) in advanced disease, why not use it in clinically early disease?

There has also been a large body of evidence accumulated over the years concerning the ability of radiotherapy to control breast cancer locally. What

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has been greatly misunderstood are the doses of radiation required. For small masses of clinically apparent cancer (3 cm or less in size) 6000-7000 rads in 6-7 weeks' time are necessary to eradicate the tumor in over 90% of instances.[5]

Microscopic (subclinical) disease can be sterilized effectively with somewhat lesser but still substantial doses of irradiation, namely 4500-5000 rads in 4½-5 weeks' time.[5] Despite the controversy over the effects of postoperative (i.e. post mastectomy) irradiation on survival, there is little doubt that local recurrence is markedly diminished by radiotherapy added to surgery. Again one must raise the question, if radiotherapy can control disease in lymph nodes and on the chest wall, why not rely on it to do the same in the breast itself? It is very instructive to read virtually the same argument advanced by McWhirter 25 years ago.[6]

With the development of radiobiology as a science over the last 20 years, it has come to be recognized that differences in the inherent radiosensitivity of most human epidermoid and adenocarcinomas are few—their radiocurability depends on other factors such as size of the tumor, tolerance of adjacent normal tissues to radiation, propensity for distant metastases. Radiotherapy is now conceded to be effective, curative therapy for many gynecologic and head and neck cancers, both epidermoid and adenocarcinomas. Again we raise the question, what is different about the breast? It is readily accessible and easy to irradiate with minimal damage to underlying normal tissues.

The size of the tumor is important, not only because of the larger number of cells contained in a bigger tumor, but also because of a tendency for large tumors to have hypoxic fractions. Hypoxia *does* dramatically alter the inherent radiosensitivity of cancer cells, in fact making them 2.5-3 times less sensitive.

Principles of Primary Radiotherapy

All of the above suggests that primary radiotherapy should be effective treatment for breast cancer if a few simple principles are adhered to. These are as follows:

(1) The gross tumor mass should be excised. This reduces the dose of radiation necessary, which in turn leads to a better cosmetic result. It also reduces the likelihood of any hypoxic cancer cells remaining which will be more resistant to the radiation. Wide local excision is not necessary—just the lump needs to be removed. If the mass is large relative to the size of the breast itself, then mastectomy may be necessary just to comfortably remove the mass.

(2) The radiation dose should be approximately 5000 rads to all areas at risk for having subclinical disease. We usually boost the area of the tumor itself with an additional 1000-1500 rads (either with implantation or external beam treatment). Strictly speaking, this may not be necessary but can easily be done without adding to morbidity.

(3) The area radiated should be the entire breast, supraclavicular, axillary and internal mammary lymph nodes. This is the radiation equivalent of an extended radical mastectomy. Is it necessary to treat such a large area? We don't know, but it can be done with minimal morbidity and was often done anyway following mastectomy. The first step is to eliminate the mastectomy—then we can study what parts of the radiotherapy might be reduced in scope.

(4) Supervoltage equipment, careful treatment planning to achieve a uniform dose distribution, matching of adjacent fields to avoid overlap, avoidance of bolus, are all important technical details to which attention must be paid if one is to get a good cosmetic result. It must always be kept in mind that we are radiating to get a better cosmetic, functional, psychological result. Survival is not likely to be very much different.

Results of Primary Radiotherapy

Radiotherapy without mastectomy remains a distinctly uncommon procedure in the United States. Our interest goes back 10-12 years, but in the early years most patients being treated were referred because they were considered to be inoperable. Gradually, however, some surgeons have begun to refer patients for this procedure for other than medical contraindications to surgery. Most of our patients, however, are self-referred—they have chosen to carefully explore all options of treatment rather than quickly submitting to mastectomy.

Nevertheless, the numbers of patients treated with radiotherapy alone at any one U.S. institution remain small. We therefore decided to combine data from four institutions with a similar interest and philosophy of treatment—Harvard, Yale, Jefferson Medical College and Hahnemann in Philadelphia. One hundred and fifty patients with clinical stage I and II breast cancer treated at these four centers with local excision and radiation were reported in *Cancer* in 1977.[8] Approximately 250 have now been treated. In stage I patients the overall 5-year survival is 97%, the relapse-free survival 92%. Clinical stage II patients have an 80% 5-year survival overall and a 60% relapse-free 5-year survival. None of these patients has had an axillary dissection or received adjuvant chemotherapy.

Similar results have been reported at other institutions throughout the world. Vera Peters at the Princess Margaret Hospital in Toronto reported a matched pair analysis of 300 stage I patients, half of whom received local excision and irradiation and the other half mastectomy, and followed from 5-35 years.[9] Sixty-seven per cent of the radiated group were free of disease compared with 58% of the mastectomy group—not a significant difference but certainly no worse in the irradiated group.

From Marseilles, France, Spitalier described 276 stage I and II patients treated with radiation (with and without local excision).[10] The disease-free survival was 85% at 5 years in stage I patients and 71% in stage II patients. In patients in whom local excision had been done these numbers increased to 90 and 79% respectively.

Risannen from Helsinki reported a 5-year survival of 80% in 415 stage I and II patients treated with radiation without mastectomy.[11]

At the M.D. Anderson Hospital (Houston), 82 stage I and II patients receiving primary radiotherapy without mastectomy had a 5-year relapse-free survival of 80% and an overall survival of 90%.[12]

In all of the above series, patients were *clinically* staged without axillary dissection and did not receive adjuvant chemotherapy.

It is interesting that the 5-year disease-free rates in clinical stage I patients are so high when we know that 30% of clinical stage I patients have axillary nodal involvement microscopically.[13] The explanation is simply that in patients who are thought clinically to be stage I, the surgical discovery of positive axillary nodes (particularly 3 or less) does not worsen the prognosis to the extent that it does in more advanced clinical stages.[3 14]

How do these results compare with more conventional treatment procedures such as radical or modified radical mastectomy. We have reviewed this subject at length.[8] Suffice it to say that most major surgical series have 5-year survivals of 80-90% for stage I patients and 60-70% for stage II—if anything, results a little inferior to those just quoted for radiotherapy.

Are 5-year results too early to discuss? Although there are many 5-year survivors who die between the 5th and 10th years, 85-90% of relapses occur before 5 years, so that the above radiotherapy results reported in terms of relapse-free survival are very unlikely to change significantly with the passage of time.[15]

Post-mastectomy Radiotherapy

As more patients are treated with primary irradiation, the issue of post-mastectomy radiotherapy will arise less commonly. Nevertheless, mastectomies are still done with considerable frequency, and the question of whether to irradiate postoperatively or not remains. Despite some well publicized articles to the contrary,[16] the true effect of postoperative radiotherapy on survival is not known because of serious design deficiencies and inadequate radiotherapy in almost all of the studies that have looked at this question. In fact, some modern recent studies are now showing statistically significant improvement in survival with postoperative irradiation.[17 18] Space does not permit going into further detail. It is our current practice to give postoperative irradiation along with adjuvant chemotherapy or hormonal therapy to patients at a high risk for relapse.

Conclusions

We hope that the above has been a convincing discussion of the efficacy of primary radiotherapy, or that it has at least raised doubts among our surgical readers as to what is the best form of local therapy. Our message as physicians is to tell the patient about these doubts. Let her participate in the decision making process and decide if she wants to keep her breast and have radiation on the basis of the available evidence or not. Let the patient see a radiotherapist in consultation before mastectomy and have the options explained to her by both surgeon and radiotherapist. Perhaps as women become aware that there are other options besides mastectomy for the treatment of breast cancer, they may seek medical attention sooner, and thus a real improvement in cure rates may result.

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Breast Reconstruction Following Ablation for Cancer

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ABSTRACT—Reconstruction of the breast following ablation for cancer is now feasible with satisfactory results. This may alleviate the anxiety of the woman faced with mastectomy. Multiple surgical techniques have proved useful in obtaining a reconstruction based on the needs and desires of the individual patient. Twenty-eight breast reconstructions on 24 patients have been performed and these are used to demonstrate the various techniques available and results obtainable.

Breast reconstruction following malignancy is now a clinical possibility. To put this into perspective, one must remember that at least 6-10% of all women who live to the age of 85 will develop carcinoma of the breast.[1] There are 60,000-70,000 new cases of breast carcinoma detected each year, of which 40,000 will have either a radical or modified radical mastectomy. Put another way, one out of 15 of all newborn girls will develop carcinoma of the breast sometime in their lives.[2]

As Lynch, *et al* have stated, almost any woman who is faced with the prospect of a mastectomy fears not only the possible death from cancer but also mutilation of her body.[3] Renneker and Cutler have reported a psychological study of women who have undergone mastectomy.[4] Depression seems to be a frequent sequela to mastectomy and is marked by anxiety, insomnia, suicidal thoughts, and a feeling of shame, and worthlessness. The breast appears to be a symbol of a woman's pride in her sexuality and motherliness. To have her breast or badge of femininity threatened with removal seems to shake the very core of her feminine orientation.

Many physicians tend to minimize these psychological reactions. They relate that the majority of their patients accept mastectomy and adjust appropriately. Organizations such as *Reach to Recovery* have been quite successful in helping women to adjust satisfactorily to disfigurement occasioned by loss of a breast. However, since publicity about the availability of breast reconstruction has spread in the last three years, it appears as though there is a much higher instance of dissatisfaction with available external forms and a greater desire for reconstruction. A final reason to evaluate reconstruction of the breast is that the availability of such reconstruction may bring women to surgery earlier and thus saves lives. It is possible that some women finding a lump in their breast may delay in seeing their surgeons because of the many psychological feelings alluded to previously.

The idea that is held by many that breasts should not be reconstructed is not dissimilar to the thinking that existed in the field of head and neck cancer 15-20 years ago. At that time, one felt that cancer defects should not be reconstructed early, if at all, and the classical "Andy Gump" deformity was a familiar site. Today those massive head and neck defects are reconstructed immediately by pedicled flaps or by tissue transferred via microvascular anastomoses, and the patients are allowed to resume their lives in a more acceptable manner. The defects secondary to ablation of the breast for cancer are aesthetically and in the body image of the patient, just as severe as those following resection of an intraoral tumor. Simply enumerated, they consist of 1) an absent breast mound; 2) the surgical scar; 3) the absent nipple-areolar complex; 4) the depressed infraclavicular fossa; 5) the deficient axillary tissue. There may also be radiation changes and/or a skin graft present. In addition to these deformities on the operated side, the nonoperated breast may be excessively large, hypoplastic, or ptotic. Therefore, it will have to be considered in planning the reconstruction.

Historically, attempts to reconstruct these defects

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centered around complicated multistaged procedures including the use of pedicled flaps.[5] [6] My first attempt at reconstruction painfully chronicled those experiences. An attempt was made to use a multiple-delayed transverse abdominal flap to provide breast tissue. After several tissue losses and many setbacks, a small portion of the originally designed flap reached the chest wall. This patient. who in all ways was a surgical disaster, remains a happy, grateful woman. She no longer requires the services of the psychiatrist who suggested the attempt at reconstruction, has been able to resume her full-time teaching position, and has convinced me to attempt to find a more satisfactory means to reconstruct the breast.

The following describes the techniques we now use in selecting patients and performing breast reconstructions following cancer surgery. These techniques are based on a series of 24 patients who have had 28 breasts reconstructed. First, an interview is held with the patient to learn the details about her cancer, her ablative operation, and her present goals. In addition, the section's psychiatrist interviews the patient. Attempts are made to determine what the patient feels are the defects which *she* is concerned about and which ones *she* wishes to have corrected. During the initial interview, the looseness of the chest skin is evaluated and a detailed program of skin massaging is begun to remove adhesions. An operative plan is then designed based on the patient's desires and modified if necessary by the psychiatrist's recommendation.

The simplest type of reconstruction that has been performed in this series is the creation of a mound. In essence, this converts the external prosthesis to an internal one. Since 1964, when Cronin and Gerow described a prosthesis consisting of the gel form of dimethylpolysiloxane in a silicone envelope, this problem has become simplified.[7] Modifications of this original prosthesis are readily available to fit most reconstructive needs. Our standard approach uses the original mastectomy scar (Figure 1). Undermining is often carried as far posteriorly as the middle of the back. Although sometimes after removal of a widened scar, there appears to be a deficiency in tissue, this wide undermining allows a tension free closure even when prosthesis up to 350cc are needed. This has allowed us to not to have to bring in additional tissue in 85% of the cases. Because of the extreme degree of undermining, the prosthesis must be carefully held in place during healing. This technique gives a very good mound and at the same time improves the surgical scar (Figure 2).

In the present series, creation of the mound has not frequently been the only goal of reconstruction listed by the patients. Although many authors have stated that most patients are content with reconstruction of the absent mound, only three of our patients have not added reconstruction of the nipple and areola as one of their main objectives. There are many approaches to reconstruction of the nipple-areolar complex. One is to transplant the patient's own nipple-areolar complex to a distant site at the time of mastectomy.[8] If this is done, pathological examination of the under surface is necessary at the time of mastectomy before transplantation to rule out unsuspected involvement by the cancer. At the time of breast reconstruction, it can be transplanted back to the new mound.

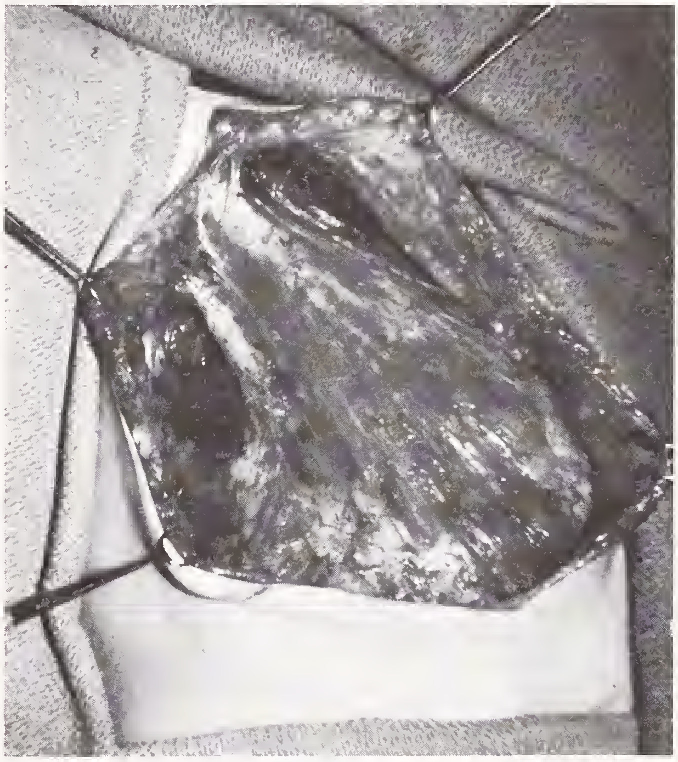


Figure 1
Developing the flaps by incising the original scar and undermining widely.

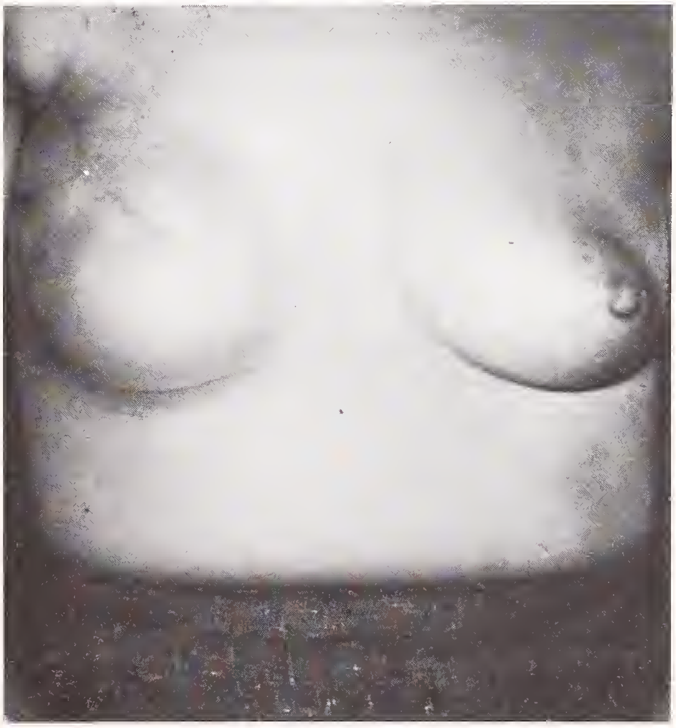


Figure 2
Completion of mound reconstruction without the need for additional tissue.

Adams described the use of the labia minora to reconstruct the nipple and areola.[9] However, this often results in a very dark pigmentation and an unsatisfactory result. A better use of the perineum for nipple-areolar reconstruction was described by Wiemer and Freeman.[10] They used a split-thickness skin graft from the labia majora for the areola and a full-thickness skin graft from the tip of the labia minora for the nipple. This gives a very satisfactory result which can be seen in Figure 3. A technique which has been found to be useful when a lighter pink complex is required is the use of a full-thickness postauricular skin graft draped over a conchal cartilage graft.[11]

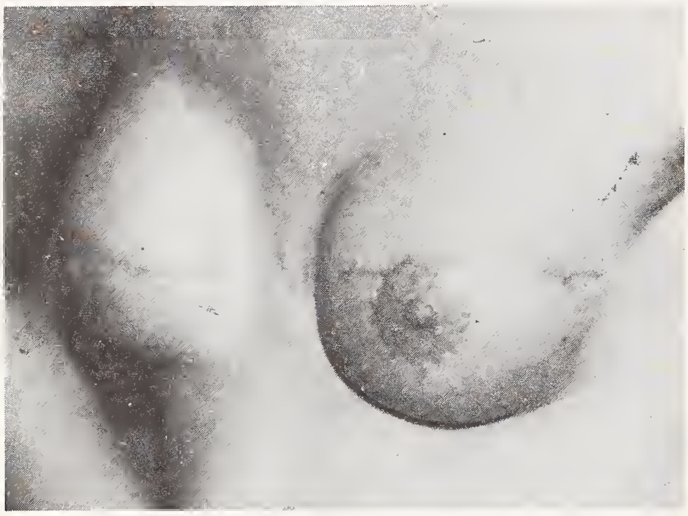


Figure 3
This patient has had bilateral reconstructions and the nipple-areolar complexes were fashioned from a split-thickness graft of labia majora and a full-thickness graft of labia minora.

By far the best technique in our hands for nipple-areolar reconstruction has been the use of tissue from the opposite uninvolved nipple. Many sharing techniques have been described and are summarized by Cronin, *et al.*[12] Figure 4 shows a spiral full-thickness areolar graft and a nipple graft using the opposite nipple and areola as a donor site.

Symmetry between the reconstructed breast and the uninvolved breast may be a problem. Ptosis may be present requiring a mastopexy. The mastopexy can be performed at the same procedure that the nipple-areolar complex is reconstructed. This makes a sharing technique for nipple-areolar reconstruction simple since areolar tissue is often discarded during performance of a mastopexy. This combination of procedures can give an excellent result (Figure 5, 6). The uninvolved breast may be too large to achieve symmetry. In this case, a reduction mammoplasty may be necessary. It is our practice, if a reduction mammoplasty is contemplated to discuss with the cancer surgeon if he desires a subcutaneous or simple mastectomy. Both of these can be easily reconstructed and decrease the chance of carcinoma arising in the opposite breast.

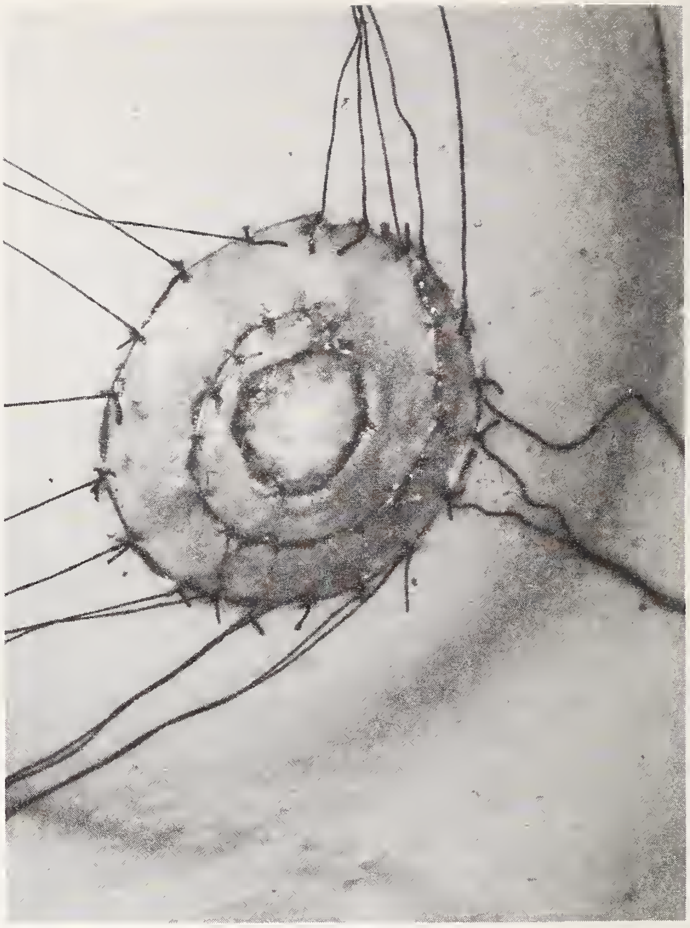


Figure 4
Constructing the nipple-areolar complex from tissue from the uninvolved breast.

Although seldom seen in this series a true tissue deficiency occasionally occurs. This may be due to severe radiation changes or to poor healing and/or the presence of a skin graft. Several procedures are available to cope with tissue deficiency. An omental flap can be tunneled into the area of the defect, placed over the prosthesis, and then have a skin graft placed over it (Figure 7). This flap, described by Arnold, *et al*,[13] is based on the right gastroepiploic vessels and gives satisfactory results in the most difficult circumstances (Figure 8). Two recently described flaps have alleviated many of the problems associated with skin deficiency on the chest wall. The first of these is the transverse thoraco-abdominal flap. This axial arterio-venous flap has been demonstrated to have great utility if the perforating vessels through the rectus abdominis muscle have not been sacrificed at the time of tumor ablation.[14] The other flap of great use for reconstruction when there is a deficiency of tissue is the latissimus dorsi musculocutaneous flap.[15] [16] This flap can be safely transferred without prior delay procedures and leaves an insignificant donor area.

The infraclavicular fossa defect can be severe with a standard radical mastectomy. If the clavicular head of the pectoralis major muscle has been spared, it may be of little significance. If it is a problem to the patient,

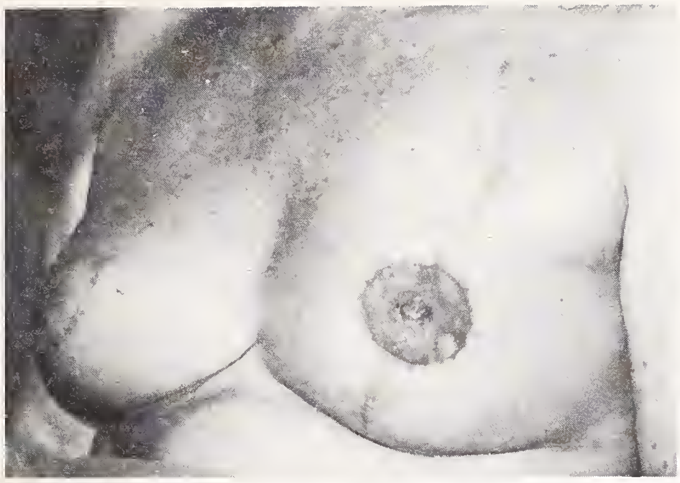


Figure 5
Left oblique view showing patient with a left breast reconstruction and a right breast mastopexy.

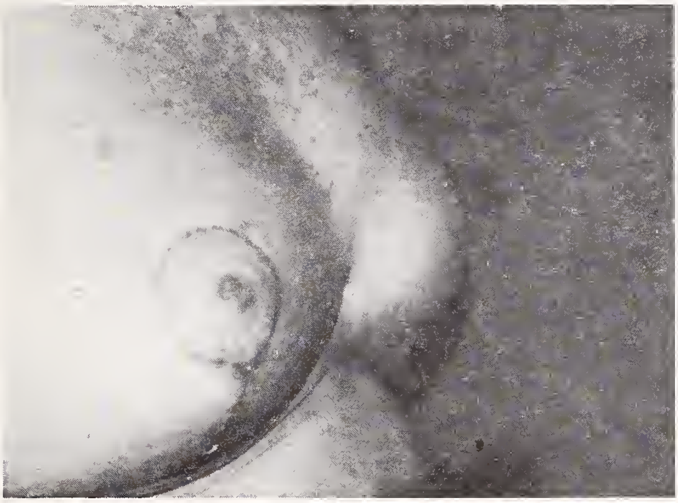


Figure 6
Right oblique view of the same patient seen in Figure 5 showing symmetry achieved after a right mastopexy to match her left breast reconstruction.

Lynch *et al* have shown it can be nicely alleviated by a muscle flap of the anterior portion of the latissimus dorsi.[3] To date, not a single patient in our series has asked for the infraclavicular fossa defect to be corrected. As stated previously the reconstruction is based on the patients' desires.

Timing of breast reconstruction has been hotly debated. To delay reconstruction until there is a reasonable assurance that recurrence or metastasis is unlikely would require several years. Local recurrences within the first four years carry a grave prognosis. Most authors recommend waiting for at least six months so that the wound can heal and the skin become pliable. It is our feeling that the routine use of fluorescein makes this delay unnecessary.[17] Therefore, in the present series, reconstruction was offered to the patient whenever the cancer surgeon would allow it. Postoperative radiation or chemotherapy has not affected the reconstruction.

Two patients have undergone reconstruction at the time of their ablative cancer surgery. One of these is

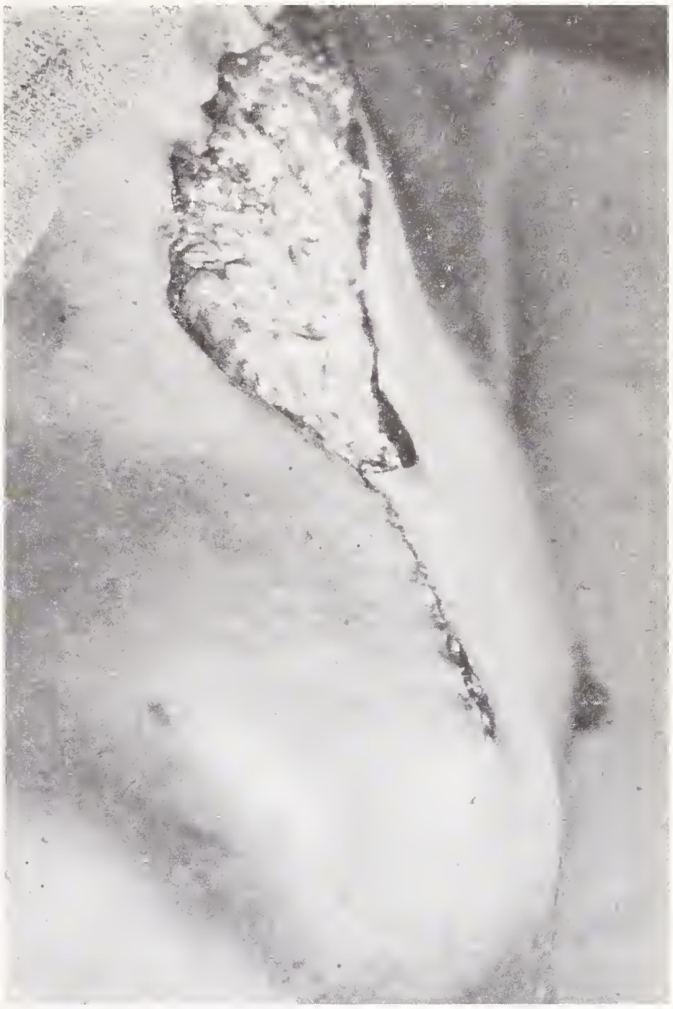


Figure 7
An omental flap has been draped over a gel-filled silastic prosthesis to alleviate the tissue deficiency.

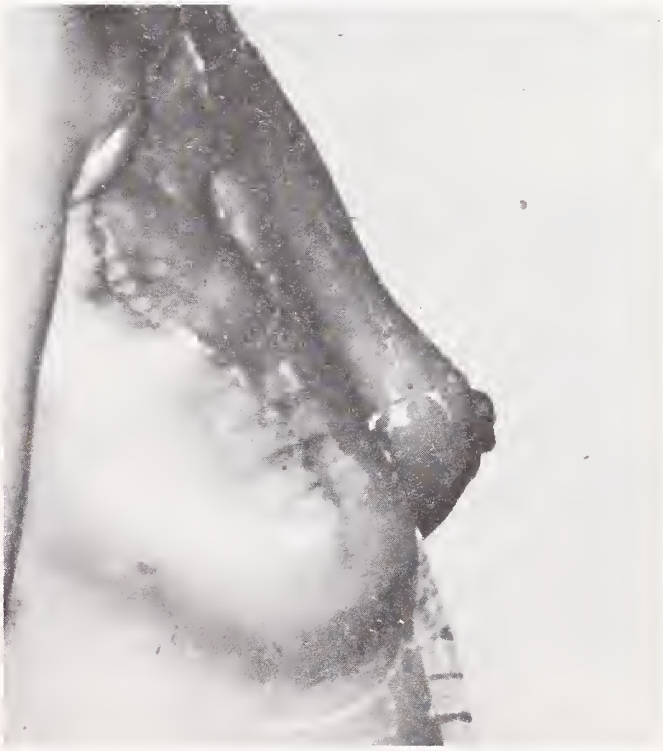
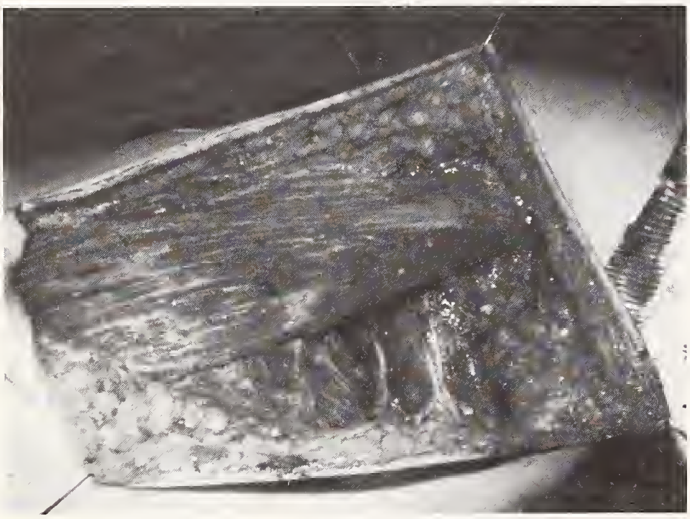


Figure 8
Completion of mound reconstruction using an omental flap and skin graft. Nipple-areolar complex was added at a later date.

shown in Figures 9 and 10. This patient refused to have her carcinoma treated unless reconstruction was performed during the same operation. Following a modified radical mastectomy, an island musculocutaneous flap based on the latissimus dorsi muscle was elevated and transferred over a 350cc prothesis. The nipple undersurface was carefully sectioned and examined pathologically. When no tumor was found, it was placed on a deepithelialized portion of the flap, completing a one stage immediate reconstruction.

It is important that the reconstructive surgeon does not attempt to influence the ablative surgeon. The paramount purpose of the operation is to cure the patient of cancer. If the same chance for cure can be offered the patient through a transverse incision, without excess skin resection, and without sacrifice of the clavicular head of the pectoralis major muscle, it is helpful. However, excellent results can be obtained when none of these things are possible.



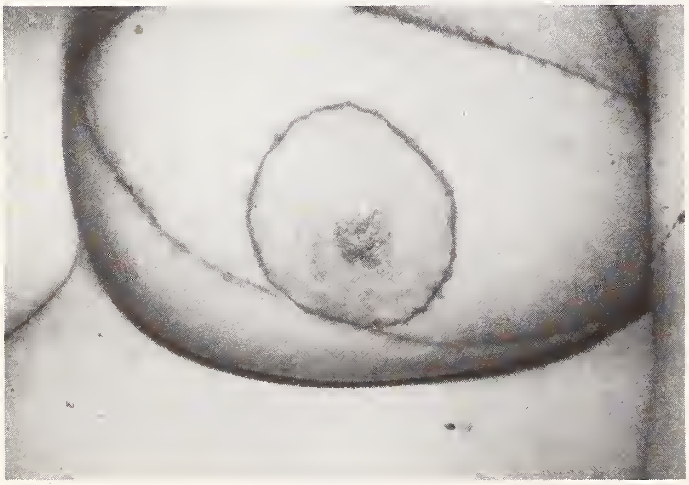


Figure 10
Patient seen in Figure 9 after immediate one stage reconstruction of her breast with an island latissimus dorsi musculocutaneous flap and a 350cc silastic prosthesis.

In summary, reconstruction of the breast after cancer surgery is possible in 1978. However, the first consideration must remain eradication of the disease. Women should be informed of the possibility of having the breast reconstructed. Ideally this information should be given to the patient prior to removal of the breast. The reconstructive surgeon must be able to adapt his reconstruction to the ablative surgeon's techniques. The two working in concert will then be able to relieve the feeling of anxiety and mutilation presently felt by the woman undergoing mastectomy. In this light, it is worth us all remembering the words of one of J.T. Hueston's patients who said, "The mastectomy saved my life . . . the reconstruction made it worth living."[18]

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Trends in Surgery for Sigmoid Diverticulitis

Surgical Grand Rounds at Yale in recent years have become a regional event for surgeons throughout this portion of the state. Planning of the program has increasingly emphasized the continuing education of surgeons, including students and housestaff. The hospitals affiliated with us have played a role, not only in participation and attendance, but also in contributions to the program. We were pleased, therefore, when the Editorial Board and Editor of *Connecticut Medicine* invited us to publish some of these programs of Grand Rounds. The following presentation begins, then, a contribution from Yale and affiliated institutions which we hope will be worthwhile for physicians throughout the state. The initial effort was developed by Dr. Hastings K. Wright of the Yale faculty.—*Arthur E. Baue, M.D., Donald Guthrie Professor and Chairman, Department of Surgery, Yale University School of Medicine.*

DR. HASTINGS K. WRIGHT (Chief of General Surgery, Yale): Following recent improvements in medical treatment of chronic sigmoid diverticulitis, the most common indication today for surgical treatment of this disease is perforation with localized abscess or peritonitis. Until recently, most surgeons in the United States have used a three-stage approach for this complication: emergency proximal colostomy, followed several weeks later by sigmoid resection, followed several more weeks later by closure of the colostomy. However, recent reports suggest that the three-stage procedure may unnecessarily prolong morbidity and disability, while not significantly decreasing the mortality rate compared to two-stage procedures. Have these recent reports influenced surgical practice in Connecticut?

We looked at the recent surgical experience with perforated sigmoid diverticulitis in four south-central Connecticut hospitals: the Milford hospital, the Norwalk Hospital, St. Mary's Hospital in Waterbury, and the Yale-New Haven Hospital. The latter three hospitals searched their medical records retrospectively from December, 1977 until they had found 25 such cases; all three hospitals found 25 cases within the period 1974-1977.

The Milford Hospital, which alone among the four hospitals had adopted a policy of performing resection of the perforated sigmoid segment with proximal colostomy where possible as the initial surgical treatment, searched its records for all cases so treated in the 1974-1977 period. The results for all hospitals are shown in the tables. Morbidity was defined as any major complication delaying hospital discharge. Length of disability was defined as number of days from onset of illness to return to pre-illness occupation.

Table I

SURGICAL TREATMENT OF ACUTE PERFORATED DIVERTICULITIS
NORWALK, ST. MARY'S AND YALE-NEW HAVEN HOSPITALS
1974 - 1977

Surgical Procedures	*No. of Pts.*	*Mortality Rate*	*Morbidity Rate*	*Mean Length of Hospitalization*	*Mean Length of Disability*
One-Stage Resection	16	6%	31%	25 days	65 days
Two-Stage Resection	13	8%	46%	33 days	93 days
Three-Stage Resection	47	0%	49%	50 days	166 days

A Panel Discussion at Surgical Grand Rounds, Yale-New Haven Hospital, June 17, 1978.

Table 2
MILFORD HOSPITAL EXPERIENCE 1974 - 1977
TWO-STAGE PROCEDURE FOR PERFORATED DIVERTICULITIS

No. of Pts.	*Mortality Rate*	*Morbidity Rate*	*Mean Length of Hospitalization*	*Mean Length of Disability*
16	0%	31%	34 days	86 days

DR. WRIGHT: I will now summarize the findings of the four hospitals before starting the panel discussion:

The data show that south-central Connecticut surgeons still favor the three-stage procedure. The mortality rate for this approach was zero, but half the patients developed major postoperative complications, usually intra-abdominal or wound infections, which required total hospitalization of almost two months and resulted in almost half a year of work disability.

The two-stage procedure cut length of hospitalization 33% and work disability by 44%. One patient did die in this group, but death was due to a stroke several weeks after an uncomplicated first stage. More important, the data clearly show that length of hospitalization and morbidity rates for the first stage of the three-stage procedure (colostomy alone) and the first stage of the two-stage procedure (colostomy *plus* resection of the infected, perforated sigmoid colon) are the same. Clearly, then, it appears that the first two stages of the classical three-stage procedure can be *combined*, saving hospitalization, money, and length of time the patient has a colostomy. The Milford Hospital figures mirror the findings of the other three hospitals with the two-stage procedure.

Surprisingly, the data also show that simple colostomy closure, the third stage of the three-stage procedure and the second stage of the two-stage procedure, is not a simple, low risk, quick procedure. Colostomy closure required an *average* of 13 days of hospitalization, probably because almost half the patients developed major postoperative wound infections.

Finally, the data indicate that one-stage procedures with one exception were all done for very localized intra-mesenteric abscesses in cases where the bowel could be prepped and the surgery performed on the regular weekly elective schedule. In one case where primary resection and anastomosis was attempted in the face of peritonitis, death resulted.

We now ask our panel to comment on these findings.

DR. WRIGHT: Dr. Coassin, over the last five years you have indicated that most surgeons at the Milford Hospital have changed to the two-stage procedure. Are any three-stage procedures being done now?

DR. NICHOLAS COASSIN (Chief of Surgery, Milford Hospital): Very few are now being done. As a matter of fact, only three three-stage procedures were done during this period as surgeons saw that one step could be avoided by doing the resection at the time the colostomy was performed.

DR. WRIGHT: Dr. Hughes, what is the current trend at the Norwalk Hospital?

DR. WILLIAM HUGHES (Chief of Surgery, Norwalk Hospital): I think that the surgeons at the Norwalk Hospital still are individualizing their approach. Of course, most were trained to do the three-stage procedure for acute perforated diverticulitis. In addition, some surgeons are still very reluctant to do a resection at the time of the original exploration in the face of generalized peritonitis. This accounts for a few of our three-stage procedures. However, now that we have looked at our results, I think there will be a trend toward doing the two-stage procedure even in the presence of peritonitis. I would emphasize too that surgeons should not attempt to do emergency one-stage procedures. If they do, anastomotic leaks will result with prolongation of hospitalization. I think the median ground is probably going to be the two-stage procedure. There will continue to be some individualization of patients, however.

DR. WRIGHT: Dr. John Madden of New York has been quoted as saying that "when pus runs, so does the surgeon" in treating diverticulitis. Surgeons take out perforated appendices. Why do they leave perforated sigmoids behind? The tendency has been to perform a transverse colostomy which does not prevent the contents of the left colon distal to the colostomy from emptying through from the perforation. The patient then tends to smolder with drainage for days or weeks, and as we can see from the data, does not on average undergo resection of the perforated, infected segment for almost four more months after colostomy.

Dr. Quigley, do you think that there are any contraindications to removing the segment of perforated colon at the time of the original procedure?

DR. WILLIAM QUIGLEY (Acting Chief, St. Mary's Hospital of Waterbury): Yes, I do. I believe that the patient with a large localized pelvic abscess may best be treated by colostomy and drainage rather than attempting to resect the segment through this infected area. Certainly, our statistics at St. Mary's show that the patients with the most advanced degrees of peritonitis were those who had three-stage procedures. The few two-stage procedures were done only for very localized perforations in the mesentery or adjacent to the bowel. We had a large number of wound abscesses when a long left abdominal incision was made in order to attempt to resect the infected segment rather than just making a small right upper quadrant transverse incision for the colostomy.

However, I do feel that the left lower quadrant should be explored in every case. If a free perforation is present, with feces pouring into the peritoneal cavity, the infected segment should come out if at all possible because of the continued seepage into the peritoneal cavity which will occur for the next several days even though a proximal, transverse colostomy has been done.

DR. WRIGHT: Dr. Coassin, are there any findings that lead your group at the Milford Hospital not to attempt to resect the infected segment at the time of the original exploration?

DR. COASSIN: In our experience, the presence of generalized peritonitis or a large left lower quadrant abscess are *not* contraindications to removal of the infected segment at the time of the original exploration. Indeed, the overall statistics from the four hospitals presented here today do not show that the morbidity rate or the mortality rate of the first procedure are any different for patients who have undergone a resection and colostomy at the time of the original procedure in comparison to just undergoing colostomy. Indeed, the length of the first hospitalization is just about the same for both groups. Therefore, I think there are almost no contraindications to resection at the first operation except for a deteriorating state of the patient on the operating table.

DR. WRIGHT: Certainly, Dr. Coassin, a recent report from New York University by Eng, Ransen and Localio[1] supports your point that most patients can have the perforated segment resected at the initial procedure. They also did not feel that generalized peritonitis or a large localized abscess were contraindications to this approach. However, statistics from the four hospitals presented today show that Connecticut surgeons at this time are still avoiding resection of the segment if generalized peritonitis or a large abscess is found. I believe that we ought to reexamine that policy at this time.

Dr. Madden has advocated another type of two-stage procedure than that done at the Milford Hospital. Instead of performing a resection in a Hartmann pouch and doing a proximal colostomy, Dr. Madden has resected the infected segment, done a primary anastomosis, and then protected this anastomosis with a proximal diverting colostomy which he later closes.

How does the panel feel about this approach?

DR. HUGHES: Several of the patients in our series were done by that method, and we have been very happy with it. There has been no mortality and little morbidity, but it has not significantly shortened the length of hospitalization or disability below that experienced by the patients who had resection and colostomy without primary anastomosis.

DR. WRIGHT: Dr. Quigley, I noted that two of your patients at St. Mary's Hospital had Mikulicz-type resections for their perforated diverticulitis. Do you think such a procedure can remove the entire infected segment and how often do you think this is an appropriate procedure for a perforated diverticulitis?

DR. QUIGLEY: The cases which had the Mikulicz-type resections had very localized areas of diverticulitis without shortened mesenteries and were amenable to this very fast approach for getting the infected segment out of the abdomen. However, 95% of the time this is going to be impossible and one will have to do a resection in order to remove the perforation.

DR. WRIGHT: What about the patient who shows a localized perforation on barium enema done at the time of the acute attack, but who does not have spreading peritoneal signs? Is it better to treat this patient with antibiotics and then attempt delayed elective resection at a later admission, or should these patients all be operated on at the time the perforation is discovered?

DR. HUGHES: Again, one has to individualize. However, if a patient is entirely asymptomatic and shows no signs of peritonitis at the time the discovery of perforation is made by barium enema, one could consider perparing the bowel, and doing a one-stage procedure. I do feel that these patients should undergo surgery during the first hospitalization. In my mind, this is the only indication for a one-stage resection of perforated diverticulitis.

DR. QUIGLEY: The four patients in our series who underwent one-stage procedures actually fell into this category. They were asymptomatic, but were shown to have a perforation on barium enema and successfully underwent one-stage procedures after prepping of the colon with antibiotics. I agree with Dr. Hughes that almost all of these patients should undergo one-stage resection at the time the perforation is discovered. These patients, of course, do not need an emergency procedure.

DR. COASSIN: I also feel that any patient demonstrated to have a perforation, even though there are no signs of peritonitis, should be prepared for surgery and operated on during the same hospitalization. Our experience has been that these patients with perforation do not remain asymptomatic if allowed to go home, and come back later with more complications.

DR. WRIGHT: We had to look at the charts of all patients admitted to the Yale-New Haven Hospital with a diagnosis of "acute diverticulitis" in order to separate out those with perforated diverticula. In doing so, we noted that all patients referred to a surgeon for an opinion because of a demonstration of perforation on barium enema underwent surgery during that same hospitalization. Therefore, it certainly is the policy at Yale to operate on all such patients.

DR. ARTHUR BAUE (Chairman, Department of Surgery, Yale University): Dr. Wright, the data show that much of the morbidity in these operations was due to wound infections. Do you think, therefore, that some change in policy in management of wounds in patients with perforated diverticulitis is in order?

DR. WRIGHT: Certainly, I think that Dr. Baue is right. Almost half the patients who had primary wound closure at the time of colostomy closure developed a wound infection. In the presence of intra-abdominal pus or where colostomy is being closed, I believe that we ought to institute a policy of leaving the subcutaneous tissue open and doing delayed primary closures after appropriate quantitative wound cultures have been obtained. Such a policy would significantly reduce the number of days of hospitalization of these patients.

DR. EDWARD STORER (Chief of Surgery, Veterans' Administration Hospital, West Haven): I recently talked at a large national post-graduate course on recent advances in gastro-intestinal surgery held at the University of Minnesota, and over 80% of the surgeons at that course indicated that they were shifting from three-stage procedures for perforated diverticulitis to a two-stage procedure where possible. All found that such a course significantly decreased the total length of hospitalization for these patients and did not change mortality and morbidity rates.

DR. WRIGHT: Thank you, Dr. Storer. In conclusion, the statistics developed by these four hospitals show that the mortality rate of surgical treatment of perforated diverticulitis in south-central Connecticut is extremely low during the three-year period from 1974 to 1977 when these statistics were gathered, independent of method of treatment. However, the majority of surgeons are still following the standard three-stage procedure in the face of increasing evidence that a two-stage procedure is equally as safe, more cost-effective and will significantly reduce both the length of time that the patient is hospitalized and has a colostomy. Finally, there is no doubt that we need to re-examine our methods of caring for the wounds in these patients with infected peritoneums in order to reduce the tremendous amount of morbidity caused by wound infections in such patients.

I thank the panel for the large amount of work that they put in at their individual hospitals to gather these statistics, and for their comments.

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The goitre is not an uncommon complaint in the settlement, attacking here, as elsewhere, mostly females, and those after the age of puberty. The disease appears to be gradually disappearing. Some twenty-five years since, it was so common that very few of the females were unaffected, and even sheep and other cattle were to be seen with large swellings of the throat. It is supposed by the inhabitants to originate from the use of the river water; but this can hardly be the case, as the same water has been freely used by those living on the lower St. John's, and yet a case of bronchocele has never been seen below the Grand Falls. It has attacked the American settlers as well as those of French origin. In one young American girl, aet. 15, it appeared after she had been in the country about a year; in two others, after they had lived on the river a longer time. In two of these cases, the disease was cured by a removal from the country.

—*Report on Sickness among U.S. Troops at Fort Kent, in Northern Maine,*
by Assistant Surgeon Alexander S. Wotherspoon, 1845

FDA and the Drug Approval Process

DONALD KENNEDY, Ph.D.

For those who like to dip into either the history of biology or the evolution of basic ideas, high on anyone's list of fascinating reading should be the works of Roman Pliny the Elder. His books on natural history present a curious bouillabaisse of fact and superstition, legend and fancy, with keen observation about the shape and habits of a great variety of animals stirred in with equally detailed observation of the unobservable: reflections on the moral attributes of the unicorn, or the visual acuity of the cyclops.

Much of what I read about FDA and about the kind of evidence required by the law FDA enforces seems to have been written by literary descendants of the elder Pliny. Often the Agency is discussed in precise terms that describe an FDA that never existed or one as extinct as the Aurochs. Perhaps one shouldn't be too surprised at the existence of such misconceptions since few are—and perhaps fewer want to be—in close contact with FDA, and the changes that have occurred in the Agency are comparatively recent.

For example, the year I graduated from college FDA had about a thousand employees who spent most of their time doing food inspections, and contending with violations out in the marketplace. Today, we have almost eight times as many employees, a large proportion of them engaged in highly technical activities surrounding the new drug approval process, the regulation of medical devices and diagnostic products, chronic toxicology evaluations of food additives, and similar high technology pursuits. Even more significantly, such activities do not ordinarily concern themselves with products out in the marketplace, but with products *before* they enter the marketplace. Indeed, the most important feature of the modern FDA, and one that commands a great portion of my time and thought, involves *potential* products. Since the potential will not be realized unless FDA confers approval, the Agency, once a kind of police instrumentality, is now a regulator of technology transfer.

This new way of regulatory life requires us to be sensitive to innovation rates, and to the nuances of the incentive structure. In the process of doing this, certain latent tensions between the Agency and various producer, consumer, or professional segments of society have become manifest. To some degree this is natural. For example, the law we enforce was almost universally applauded when it was confined to protecting persons against risk involuntarily assumed—like rat feces in the semolina—but not so widely applauded when it also protects them against risks they voluntarily assume—like carcinogens in diet drinks. ("Not so widely applauded," when that phrase refers to our action regarding saccharin, is an almost sinful euphemism. I now join many of my California brethren in understanding the sound of one hand clapping.)

In regard to physicians and other health care professionals, I am sure there was no argument with the proto-FDA that enforced the 1906 Food and Drugs Act since the drugs that were primarily affected by that Act were those that were beyond the pale, the nostrums and quack remedies that flourished like toadstools at medicine's shadowy margin.

Of the many limitations of that law, retrospectively the most serious was a complete absence of mandatory safety testing before marketing. This was made tragically obvious when a quack remedy, exploiting the renown of the first sulfa drug, killed over 100 persons. The Elixir Sulfanilamide tragedy coincided with three more fundamental developments, two scientific and one political. The first scientific development was expressed in a cascade of important new drugs, such as sulfanilamide, that were the product of synthesis rather than, as throughout the history of pharmacy, of discovery. These drugs, as Dr. Lewis Thomas points out, were " . . . the direct

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DONALD KENNEDY, PH.D., Commissioner of Food and Drugs, Food and Drug Administration, Rockville, MD.

outcome of many years of hard work, done by imaginative and skilled scientists, none of whom had the faintest idea that penicillin and streptomycin lay somewhere in the decades ahead."

This, Thomas then adds, " . . . was basic science of a very high order, storing up a great mass of interesting knowledge for its own sake, creating, so to speak, a bank of information, ready for drawing on when the time for intelligent use arrived." This was the second, and interrelated, development. For the basic knowledge not only led to the creation of drugs, it also provided insight into how drugs *could* be created and how they acted on the human organism. Thus, in addition to what might be called "answers" in the form of new therapeutic agents, the new knowledge also permitted asking far more piercing questions about drugs. In short, just as it was becoming possible to produce new drugs, it was simultaneously becoming possible to demand a far higher level of proof that the drugs were safe. This second scientific development was transformed into law by the political experimentation of the New Deal, which saw a five year struggle (led by Rexford Rugwell) to create a drug law capable of maximizing the benefits and minimizing the risks to society of the new chemicals that were being produced.

The result of that struggle, the Food, Drug and Cosmetic Act of 1938, is still the basic statute guiding FDA's drug regulatory activities, as supplemented by major amendment in 1962.

These statutes established important principles: that drugs be proven safe and effective before marketing, that this process of proof be undertaken by the manufacturer or other drug sponsor to the satisfaction of FDA, and that proof be of a certain, specific, rigorous kind, i.e., that the tests consist " . . . of adequate and well-controlled investigations, by experts qualified by scientific training and experience to evaluate the effectiveness of the drug involved, on the basis of which it could fairly and responsibly be concluded by such experts that the drug will have the effect it purports or is represented to have . . . " in its labeling.

When a drug company or other drug sponsor such as a nonprofit institution or individual investigator or practitioner wishes to get permission to market a new drug, the first step requires filing a notice of Claimed Exemption for an Investigational New Drug (IND). *No research on any new drug in human beings can take place prior to this filing.* This IND must contain certain essential data, including the structural formula of the new drug, control and manufacturing data, a description of the clinical investigators participating in the study, a protocol outlining the planned investigation, and similar pertinent information. Most importantly, the IND must be accompanied by data, generally from animal experiments that support the safety of the drug under study for the proposed dosage and duration of administration.

After the sponsor submits the original IND, 30 days must elapse before clinical trials are begun with the investigational drug. During this period, the FDA has the opportunity to review the IND with respect to important safety problems and to request modification of the study or to ask the sponsor to continue or withhold or to restrict the use of the drug in human subjects.

If the FDA is satisfied from this preclinical data that the new drug poses no hazard that would preclude further testing, three phases of clinical research commence. Phase I is also concerned with safety and involves the initial administration of the new drug to a small number of healthy volunteers. If the drug is shown to be reasonably safe for human use, Phase II can commence. In this phase, trials are conducted on a limited number of *patients*, by unusually experienced and specialized clinicians.

If data from both of these phases provide adequate assurance of safety, effectiveness, and reveal a favorable benefit/risk ratio, large scale clinical trials commence. These Phase III trials provide much more extensive testing of the drug's safety and effectiveness in clinical settings much more like those in which the drug will actually be used. They also provide data on the dosage preferred to treat a specific disease.

Although the primary purpose of the IND is to prevent exposure of human subjects engaged in the research to unjustified and unnecessary safety risk, a secondary purpose is to ensure the appropriateness and scientific design of studies under the IND so that the IND review process may anticipate and prevent problems that might arise later.

Thus, the IND is the crucial stage in the drug approval process, and FDA expects that unsafe and ineffective drugs will be identified during it—or earlier. Such drugs will not even progress to the next stage, a formal new drug application or NDA. During both the IND and NDA stage, FDA works closely with the sponsor to monitor the progress of the investigational study, and sponsors are also required to notify FDA immediately upon occurrence of an unexpected or severe adverse reaction. Where there is an unexpected or serious finding in human subjects or in continuing studies on animals, a determination is made as to whether the human studies should be permitted to continue or if special laboratory tests or safety studies need to be undertaken.

Before I make any further comment about this process, I want to examine the adequacy of preclinical test data.

A number of questions have been raised regarding animal tests, the most important of which are these: do tests with animals provide sufficient proof of

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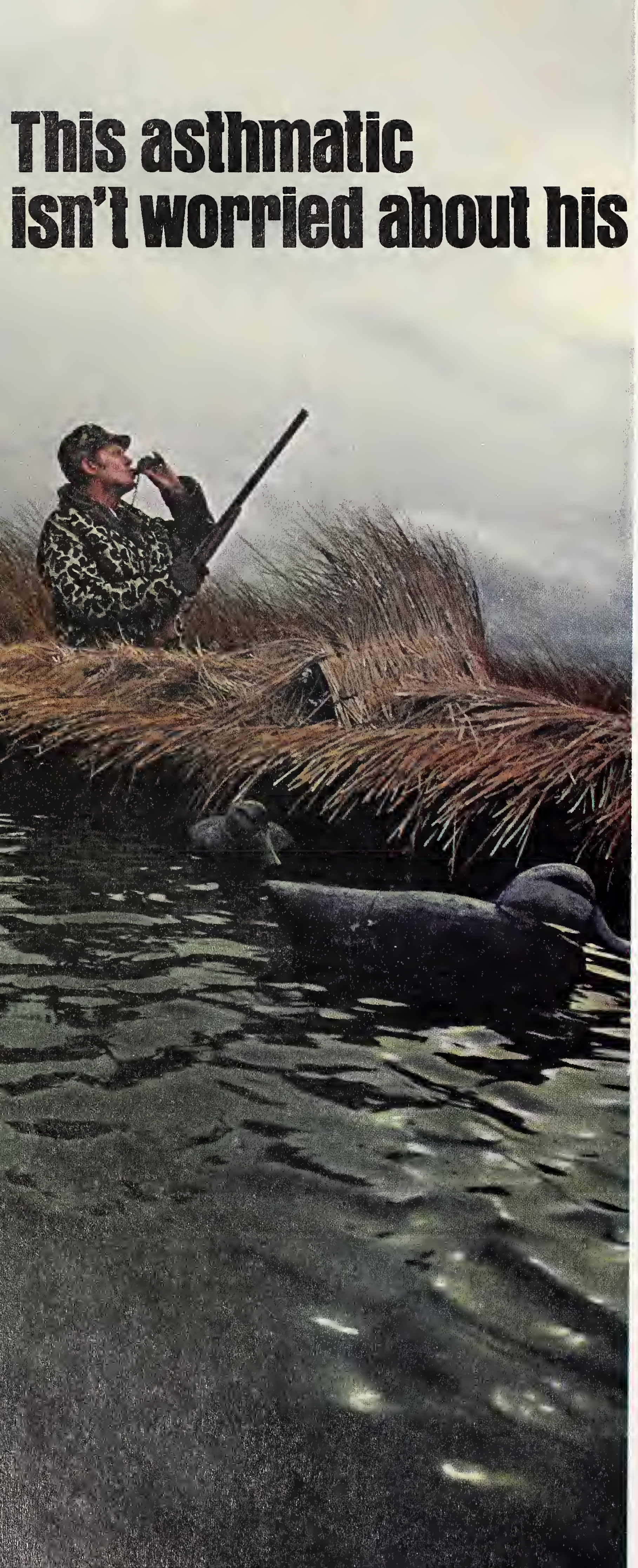

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safety? Why are extraordinarily large doses used in testing for carcinogenic potential? And are there ways to test for carcinogenicity other than the time-consuming, expensive animal tests?

A good way to get some perspective on that first question is to turn back to Pliny the Elder and note that what most interested him and many subsequent generations of biologists was the diversity of living systems. Only yesterday, by comparison, have we come to appreciate the internal uniformity of life that is hidden beneath all the external variety. This unity includes the way in which living systems extract energy from their environment; how chemical sequences transmit hereditary information; how growth is controlled; how messages are moved in central nervous systems. While evolutionary processes have been radical in proliferating life forms, they have been conservative in maintaining these and a few other underlying processes. Among these conservative processes are those that involve injury and repair. Organisms now encounter thousands of molecules with which no living system has any evolutionary experience; but they have a limited array of vulnerabilities and of defenses. Somewhere between 1930 and 1940, drug development changed qualitatively, as well as quantitatively. Before this time, new drugs were found by a process of discovery *from natural sources:* when, in 1776, William Withering introduced digitalis to medicine he was relying on a botanical from the foxglove plant *(Digitalis purpurea).* Withering was actually the beneficiary of centuries of rough-and-ready clinical trials. In contrast, the powerful new compounds developed by modern pharmacologists are more often the products of novel laboratory synthesis, whose relative safety must be ascertained much more carefully.

Because cancer has become the most dreaded disease in the United States and in most of the developed world, it is hardly surprising that special emphasis is accorded to the possible carcinogenicity of new chemical entities, whether they be drugs or food additives. In screening new compounds for carcinogenicity there are certain major difficulties, in addition to those that stem from interspecies variations in tolerance and metabolism rates. Two of these relate to the question, often asked of FDA, of why we do not rely more heavily on epidemiological studies. The answers have to do with both novelty and precision. The first is self-explanatory. There has not been enough human exposure to the novel chemicals, either in terms of time or of quantity. The second reason goes to the heart of *all* toxicity testing. Incidence (the *frequency* with which cancer or some other disease appears in the exposed population) is proportional to the concentration of the agent over most of the exposure range. Concentration dependence is not easy to demonstrate in epidemiological studies. It is hard—indeed, quite often impossible—to find populations at each of several different, precisely specified concentrations. The accompanying table shows, by way of example, the relation between liver cancer rates and estimated average intake of aflatoxin, a carcinogenic product of a mold that has concerned FDA recently because of its prevalence in corn grown in the Southeast this past year. The estimates in the table were assembled by S.J. van Rensburg from various epidemiological studies. As is often the case, the data do not give an entirely clear picture. Other independent variables may skew the data—for example, present exposure may not accurately reflect past experience, and other dietary or disease factors may influence the results.

We do, however, have data from animal studies on a variety of carcinogens that demonstrate this kind of dose-response relationship. A variety of cancers and a large number of different cancer-causing agents have been studied in all of the major species of small laboratory mammals, so there can be little doubt that a fundamental biological relationship between the amount of the chemical and the probability that a tumor will form is being revealed. Indeed, the only serious debate about the dose-response relationship in the scientific community relates not to its form over most of the response range, but to its behavior at very low concentrations. The least conservative hypothesis, of which the chemical industry is understandably fond, holds that the curve bends downward abruptly at some low concentration, in such a way that there is a *threshold* below which the tumor incidence is zero. The most conservative hypothesis argues that the relationship continues to be *linear at low dose.* Between these there is a statistical extrapolation method proposed originally by Mantel and Bryan. The threshold hypothesis, apart from its suspicious convenience, should certainly be rejected on the grounds that no threshold has ever been detected for a carcinogen; between the other two there is likely to be argument for some time.

Table I

SUMMARY OF EPIDEMIOLOGICAL DATA MEASURING PRIMARY LIVER CANCER RATES AND AFLATOXIN RATES*

Locality	*Liver Cancer Rate* (10^5/year)	*Aflatoxin Intake* (ng/kg body weight day)
Kenya—High altitude	0.7	3.5
Thailand—Songkhla	2.0	5.0
Swaziland—Highveld	2.2	5.1
Kenya—Middle altitude	2.9	5.8
Swaziland—Middleveld	4.0	8.9
Kenya—Low altitude	4.2	10.0
Thailand—Ratburi	6.0	45.0
Swaziland—Lowveld	9.7	43.1
Mozambique—Inhambane	13.0	222.4

*From van Rensburg, 1974

The first important result of animal testing, then, has been the establishment of a relationship between cancer incidence and dosage—a relationship so general that over most of the concentration range it can be applied confidently to any chronic chemical hazard.

This confidence allows us to reach out for cases of extreme human exposure whenever we encounter evidence that makes us suspicious of a chemical. To use a contemporary example, several manufacturers began fabricating light-weight plastic bottles from a plastic called acrylonitrile. FDA-sponsored feeding studies on laboratory animals involving this chemical compound demonstrated that the incidence of tumors was increased. Our proposal to ban acrylonitrile as a food additive focused attention on cancer incidence in workers exposed to the compound during its manufacture.

Through an in-house registry maintained by Dupont, the major manufacturer, it was possible to show that the frequency of cancer in a sample of acrylonitrile workers was about three times that in a matched control group.

But it is seldom possible to find heavily-exposed populations; and even if it were, there are some significant aspects of cancer that would make the design of such studies very difficult. These can be illustrated by making some assumptions that require, in large measure, the "willing suspension of disbelief." Dr. Harvey Wiley, the father of food and drug regulation in the United States, began his work with the Department of Agriculture by assembling a group of young men who came to be called Dr. Wiley's Poison Squad. These healthy volunteers consumed a variety of food additive substances as part of their daily diets, and Wiley monitored them for ill effects. Wiley was as moral as he was careful, and there is no record that a member of the squad ever suffered serious harm as a consequence of this rather unusual occupation. But suppose that we were governed by a set of ethical constraints so different that we were willing to use a human "poison squad" as society's carcinogenic risk detector? Would our scientific task be materially simplified?

The answer is, of course, that it would not. We could not possibly know all that we should about the genetic history and developmental exposure of the volunteers so that we could apply this information to constructing a suitable control group. But even if this were somehow overcome, there would be further difficulties, the most important of which is time. The emergence of cancer is often attenuated over decades. There are even some examples, such as when diethylstilbestrol was mistakenly used in the 1940's to prevent spontaneous abortions, that involve a second generation.

For various reasons then—not all of them by any means having to do with ethics—carcinogensis testing is done in the smaller laboratory mammals. Such work is hardly simple. It requires genetically inbred strains of animals, housed over long periods of time under conditions that are extremely demanding; the requirements for maintenance and record-keeping make chronic toxicology an exercise that is labor—as well as resource—intensive. For example, FDA's National Center for Toxicological Research (NCTR) at Pine Bluff, Arkansas, maintains strictly controlled environments called barrier rooms, in which experimental animals are sealed off from any known contaminants. Before entering the animal rooms the animal handlers brush their teeth, gargle, shower, scrub their hair and then don surgical masks. Both water and air are monitored for purity, with the latter filtered to keep out all but the smallest particles, and feed, bedding, cages, all are uniform and sterilized or sterile when they come into contact with the experimental animals. Even the "interior environment" of each animal is kept as uniform as possible through continual monitoring for, and elimination of, some 79 specific pathogens (20 bacteria, 13 fungi, 33 parasites and 13 viruses). The Chemical being tested on the experimental group is measured out in exact doses by a technique that eliminates the need for human contact and possible contamination. Weekly observations about body weight and physical characteristics, food consumption, test chemical, environmental changes such as temperature, date of death, 28 separate observations on 48 organs after death, blood chemistry, organ weights, etc. all are recorded on computer file for each animal.

Thus, in a normal chronic test in which 100 experimental animals are involved—at a typical cost, incidentally, of over a quarter of a million dollars—the 100 animals represent our total population of over 200-million. If we assume that the data gained from the animal is relevant—can be extrapolated to—humans, then each animal is "standing in" for two-million Americans. If the excess rate of cancer in the experimental group being exposed to a particular chemical is five percent, that is the equivalent of five percent of 200-million or 10-million additional cases of human cancer if the entire U.S. population was exposed. This would be a disaster! We can take little comfort that such results are not known to occur, for the long latency period between exposure and the production of a detectable cancer is such that we do not know if such a circumstance has not already occurred.

A five percent excess of tumors in an experimental group is close to the sensitivity limit of the test. We could compensate for this by increasing the number of animals but due to the high costs involved this is not a realistic option. What we are unable practically to do by increasing the *population* of animals tested is increase the *amount* or dose of the test substance in the population we can test. Until better test methods are available we must continue this procedure.

This upward readjustment of the dose is responsible for much of the confusion about the meaning of animal tests for cancer. This confusion is usually seen in two often heard questions: "Won't too much of anything produce cancer?" and "Aren't such massive overdoses irrelevant to humans?"

Tests with animals have given us clear answers to these questions. As the result of experimenting with thousands of substances, we have learned that too much of any substance will *kill* the experimental animals; but only a small number of substances will cause cancer—in *any* amount. A study in 1969 sponsored by the National Cancer Institute tested 120 pesticides and industrial chemicals in mice at high doses. Only 11 of these were found definitely to cause tumors. And these 120 compounds were chosen because there were already good reasons for being suspicious of them.

Since there are a thousand *new* chemicals to be tested each year, and tens of thousands of others yet to be tested or retested, there aren't enough breeders, time, money, or skilled tissue examiners to permit tests of this kind on huge numbers of animals. The NCTR does have one very large experiment that involves low doses on 24,000 animals, but this is a special effort designed for a unique purpose. And even such an experiment, with its major commitment of resources, does not possess the kind of resolving power capable of uncovering weak carcinogens. An FDA scientific advisory panel put it in this way: "To reduce the upper limit of risk to two tumors per one-million (with a 99.9 percent confidence factor) would require a negative result in somewhat more than three-million animals." So the potential for causing cancer is not something that is widespread among chemicals, and readily revealed upon heroic exposure. Instead it is a rare property which behaves exactly as though it depended upon some specific (but yet undiscovered) relationship between the carcinogenic chemical and the chemistry of the living cell. There is, in short, every reason to believe that cancer represents one of the basic life processes gone subtly awry. The strong similarities between cancer in animals and humans, together with the growing evidence that cancer-causing chemicals interfered with the biochemistry of genetic material, are powerful arguments for the appropriateness of animal models for human cancer—which we strengthen by minimizing the taxonomic distance between the experimental animals and ourselves. There is, finally, the persuasive comparison between the substances known to cause cancer in humans and their effect on laboratory animals. Of eighteen known human carcinogens, all but two *also* are cancer-causing in animal tests.

Indeed, if anything, the animal tests are likely to be much too conservative in predicting human cancer. The pampered darlings of the toxicology laboratory are, in all respects other than their intake of a specific suspect chemical, treated to a remarkably healthy life. Like the lilies of the field, they toil not; neither do they spin. Neither do they experience much stress, smoke, eat badly, get a tan, or keep irregular hours. The even-aged, healthy animals inside the building are confronting a single chemical hazard; we on the outside are running a gauntlet of them. We are now able to only glimpse the effect of combined hazards, but the glimpses are not reassuring: moderate smokers who drink heavily, for example, are 25 times more likely to develop cancer of the esophagus than are moderate smokers who do not drink at all. Such synergisms are showing up more and more frequently.

It seems probable that in twenty or thirty years we will not be doing animal testing as we are doing it today. Compared with most other contemporary biological technology it is crude, cumbersome and expensive. It lacks the speed and finesse of the new techniques now being developed to test chemicals for their mutagenic effects, such as the Ames *Salmonella* microsome mutagenicity assay. Named for its inventor, Dr. Bruce N. Ames of the University of California at Berkeley, this new technique in molecular biology is being widely used as an early-warning screening device, based on the fact that 90 percent of all carcinogens can be detected as mutagens. Thus, when a suspect chemical is added (after "activation") to a colony of any of five strains of *Salmonella* (or any of several strains of *E. coli*), if the mutagenic activity exceeds that of a control, nonmutagenic chemical, there is strong, *easily secured,* evidence of potential carcinogenicity. This procedure, and other *in vitro* tests, offers hope of decreasing the time and cost presently involved in carcinogenicity testing. However, it is as yet impossible to say with certainty that the new methods really test for cancer-causing potential or for some other related property. Until we gain the necessary confidence in such assays, the animal tests, whatever their defects, remain the only scientifically valid way of assessing the chronic risks associated with human exposure to chemicals.

In discussing the value of animal tests, I have really been focusing on the pre-clinical stage of the drug approval process. It is interesting that so many questions are raised about this stage in the process, and so few about the clinical testing phase where, particularly for Phase III, the level of confidence is much lower. This can be seen by the fact that during the third Phase of the clinical trials, which I mentioned earlier, FDA is being exposed to the experience of a relatively limited number of human volunteers, often atypical of the general population.

From the thousand or so persons who, at a maximum, will be involved in most clinical trials, exposure to a drug takes a quantum leap to a potential market of 2, 20, or 100-million people who may be taking the drug dozens of times a year—over a period of many years. The risk we weigh on the basis of closely-controlled, but short-term, numerically-limited experiments may not prove to be at all the same as the risk we come to know over a long period of experience in the marketplace.

With this greatly expanded exposure, a variety of relatively rare adverse drug reactions may become evident.

Ideally, such relatively rare effects could be detected very quickly so that—should they be serious—the use of the drug might be appropriately modified. It is clear, however, that sometimes such effects are discovered quite belatedly. For example, the fact that clindamycin and lincomycin cause pseudomembranous colitis much more commonly than other antibiotics was discovered a number of years after those drugs entered the market.

Compounding lack of a reliable, fast, automatic reporting system that would enable FDA and the medical profession to know quickly of drugs that reveal an unusual degree of hazard after approval is a second weakness in our present legal authority. The procedures governing removal of a dangerous or ineffective drug from the market are inflexible. Unless an "imminent hazard" can be shown, the removal process entails lengthy hearings, during which time the drug in question continues to be sold. The "imminent hazard" revision is so drastic that it has been used but once, last year, when HEW Secretary Califano (the only official designated by the law who may invoke this provision) ordered on FDA's advice an end to the general marketing of phenformin, an oral hypoglycemic.

To deal with this constellation of problems, as well as other major deficiencies in FDA's basic law, FDA and the Department of Health, Education and Welfare have drafted a drug law revision which has already been the subject of a public hearing, and about which this Administration is seeking the widest possible spectrum of advice and guidance. For example, we intend to propose ways in which useful drugs for a very limited population *could* be marketed under special controls, where present law would not permit them at all.

Drug law revision comes only at long intervals in our society. The first law governing the interstate sale of drugs was in 1906. Even though this statute had major deficiencies—drugs were not even required to prove safety under conditions of use, or indeed *any* conditions—it took 32 years to get a new law, and 24 more years to amend that law substantially, despite the fact that the intervening period has been characterized as one of a chemotherapeutic revolution. It appears that a consensus is growing that *now* is the time to eliminate the deficiencies that have emerged since 1962. I want that process of revision to be so well conceived that it will suffice to carry us well into the next century, while also serving in a far more effective way than our present law to facilitate medical care, stimulate research, and advance the interests of the patient. In working toward these ends, we solicit the help of all concerned physicians and other health care professionals.

Smallpox Completely Eradicated

For the first time in recorded history, the world has gone 6 months without a single reported case of smallpox, according to the World Health Organization. What is thought to be the last case occurred last October in Somalia, Africa. Although another 18 months of surveillance are needed to declare the East African nation completely free of smallpox, WHO administrators say they are fairly confident it will not show up there again. Only 10 years ago, when the WHO effort to eradicate smallpox began, millions of cases occurred throughout the world annually. The last US outbreak was in 1949. By the end of 1975, the rest of the Americas, Europe, and Asia were free of the disease. Although WHO reported last year that variola major, the most virulent form of smallpox, had been eradicated, a milder form remained in Somalia until the final case was reported.—*Modern Medicine*, June 30-July 15, 1978.

What Are We Teaching When We Teach Human Sexuality?

CAROLINE WHITBECK, PH.D.

There are two sorts of answers to this question, both of which reveal some interesting things about the values and attitudes in medical education and medical practice. One sort of answer to the question about what we are teaching in human sexuality courses concerns the kinds of changes in future medical personnel that such courses are designed to bring about. The second sort of answer concerns the view of sexuality which is implicitly and explicitly conveyed in these courses.

What I intend to do first is to point out some of the goals that are set forth by people, like Dr. Harold Lief,[1] who have pioneered in introducing these courses into medical and nursing education, and to point out what innovations in the area of sex education illustrate about more general proposals for reform in medical education. Afterwards, I shall go on to show some areas where the view of human sexuality may be either biased or incoherent. The most consistent bias that I have observed is an ancient variety of sexism, one which seems to be particularly resistant to diagnosis and treatment because it is at once common, subtle, and ingenuous. Other biases vary from a gratuitous anti-religious emphasis to a judgmental attitude toward homosexuality.

I. The Purpose of Teaching Human Sexuality

I shall return to these more controversial topics in a few moments, but first I shall consider what sort of changes are necessary if we are to turn out practitioners who, among other things, are to be competent to take a sexual history, deal with sexual aspects of medical conditions, and either treat or intelligently refer patients with primary sexual problems. The assumption which underlies all these proposals is that doctors who were graduated even a decade ago were not competent to do these things. Studies by Lief among others have shown this assumption of ignorance on the part of medical students and doctors to be well-grounded (Lief, 1974).

It should be noted that similar deficiencies have been discovered in the typical practitioner's ability to deal with other emotionally laden topics and situations that frequently arise in medical practice. Death represents the closest parallel to sexuality in this regard, but such ubiquitous issues as uncertainty (of diagnosis or prognosis) are equally problematic for many practitioners.

Many moral issues in medicine are thought to revolve around the issue of whether, when, or to what extent, paternalistic behavior on the part of medical practitioners is morally justifiable. Very roughly, behavior is said to be paternalistic if it involves going against our usual understanding of what is morally acceptable behavior towards another person, and doing so for that person's own good.[2] However, in view of the studies by Lief and others which show that many doctors seem to be *unable to do anything other* than avoid or disregard subjects like sexuality, death, or medical uncertainty, it makes little sense to talk about their having *chosen* the avoidance or coverup behavior "for the good of the patient." I do not deny that the *rationalizations* given for many such acts may make them sound like (justifiable or unjustifiable)

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acts of paternalism, but to actually *be acts of* paternalism they would have had to have been done for the patient's good, and not because the practitioner was *not able* to do otherwise or was not *willing to risk attempting* to do otherwise. So I am suggesting that, contrary to what many have said, paternalism may not be the issue which is immediately confronting us. (This is not to say that paternalism may not *become* a central issue once practitioners have a wide range of behaviors at their disposal. Practitioners with such a wide range of behaviors at their disposal might then choose to act paternalistically.)

Several goals have been proposed by those urging reform of medical school curricula by the addition of human sexuality courses. The same or similar goals are proposed by thoughtful medical educators who are urging many of the other reforms in medical education as well. The first, and I think the least realistic of these is to change the personalities of medical students while in medical school. In his article, "Preparing the Physician to Become a Sex Counselor and Educator," Dr. Lief tells us that the medical students who have been found to turn out to be the poorest sexual counselors are the poised, competent, "adjusted" students who are out of touch with their own feelings, embarrassed by their own emotions, and uncomfortable with any open expression of emotion on the part of patients. He proposes that those students should be educated to become "concerned, compassionate, empathetic physician(s)" ([1969] 453).

However, just as it is vain to search for the so-called philosopher's stone, the stone which can turn base metals into gold, so it is vain to try to devise a course or two that will change emotionally out-of-touch individuals into compassionate, empathic ones. The only reliable way to get gold is to start with gold ore and refine it properly, and the only reliable way to get compassionate empathic practitioners is to look for individuals with those traits in one's admissions procedure, and revise the pace and tenor of medical education so that such empathic individuals can survive in it, as many medical educators have urged. Some experiments with medical school admissions have been undertaken. I understand that some years ago the University of Washington made it a point to take half of its class from among the arts majors and this turned out to have good results when these students reached their clinical years. However, the problem of admissions criteria is a complex one, and compassion does not invariably correlate with humanistic education, nor uptightness with a scientific one.

If we can not expect the introduction of a few new courses to transform the professional personalities of medical students, what can we expect such courses to do? Here, we encounter a second and more reasonable goal, that of teaching the student some basic communication and counseling skills.

With regard to teaching communications skills, it is the baccalaureate nursing programs rather than the medical schools which have taken the lead. The teaching of communication skills has for a number of years been an integral part of these nursing programs, and acquisition of these skills is required for continuance and completion of the program.

Admittedly, particular personality traits may make a student more or less likely to be able to attain an acceptable level of competence in these areas, but surely this is the case with all skills. Even if an empathetic disposition may incline a student to be a creative listener, still the desire to be and appear competent will prompt the uptight achiever to acquire communication skills, once it is made clear that the communication skills are not merely a nice addition to, but *an essential part* of the physician's competence, and one cannot graduate without them.

Perhaps some medical school faculty will not be willing to require, acquire, and model these communication skills. If they are not, then perhaps their students will be most effective in settings such as those found in some of the new regional health centers. Here it is a nurse clinician, well-versed in communication skills, who deals with patients, and doctors are utilized mainly to give advice in difficult or problematic cases.

II. The View of Sexuality Conveyed in These Courses

Let me turn now to the second sort of answer to my question, "What are we teaching when we teach human sexuality?" As I warned you, I am going to raise some questions and offer some criticisms of the view of sexuality that is presented in the writing of some of the pioneers in this area and in some of *the best* courses which are now offered. Now this may seem an ungrateful thing to do. After all, why criticize the statements of people who have done so much to improve things, or why pick on the flaws in the *best* courses when in so many places the courses are poor, fragmentary, or non-existent? My answer is that what I offer is criticism of the flaws, not an attack on the individuals who created these very helpful, but still flawed courses and outlooks.[3]

The biases in the presentation of the subject of human sexuality are quite often evident. For example, in the article previously cited, we find Dr. Lief saying that pediatricians should be specially trained to make an early detection of "conflicts of gender role, and parental reactions to them." He goes on:

> One area where early intervention would certainly be important is in conflicts of gender role, and parental reactions to them. This can be a very

> tricky situation. It might involve, for example, a boy's interest in artistic matters or a girl's interest in mathematics and physics. The problem is usually a parental one involving an excessively stereotyped attitude toward sexual gender role, but it may, in fact, signify the onset of a severe disturbance in gender identification and a homosexual orientation. (Lief, 1969, p. 455)

(At least Lief did not say that a girl wanting to be a doctor might be symptomatic of a disturbance in gender identification.) Of course, wanting to study mathematics and physics is no more a diagnostic sign in a female than it is in a male. Some males may choose to study mathematics and physics because they cannot deal with concrete reality or with other human beings. However, it is not their choice of field, but their inability to deal with concrete reality or other human beings which manifests emotional disturbance. Most any choice can be made for neurotic reasons, but this does not mean that all acts and choices should be considered as possible signs of neurosis. Lief confuses matters with his notion of "gender role" which is an odd amalgam of the concept of gender identification (which is undisturbed if one knows what sex one is) and sex role behavior (which is acceptable to one's society if one conforms one's behavior to the stereotypes that the society lays down for persons of one's sex). On top of reinforcing some reactionary sex roles, the passage quoted ends by invoking the very knee jerk fear of homosexuality that courses in human sexuality are supposed to combat.

I do not wish to dwell on such gross slips, since they are readily detectable, but instead to direct your attention to the subtler message conveyed in the best of human sexuality courses, the message that women are sexual objects (as opposed to sexual subjects).

My view of human sexuality courses is based on two years' experience as a co-preceptor for a very fine six-week intensive course in human sexuality, taught as part of the required OB-GYN course for sophomore medical students at Albany Medical College, as well as upon reading and discussion with other sex educators, and upon Bart's review (Bart [1976]). In the course in which I was involved, a two-hour lecture and a two-hour small group discussion meeting were held each week for six weeks. In addition, there were optional discussions and workshops each week on such subjects as massage and relaxation, in-depth discussions of sex roles, open marriage and gay life styles. The first lecture consisted of an introduction and desensitization using what are called "explicit visuals" (i.e., films and slides of people engaging in various forms of sexual activity). The subsequent lectures covered the topics of normal sexual behavior, sex roles, homosexuality, sexual dysfunction and its treatment, rape, sexuality and sexual problems of the handicapped and infirmed. The course most closely resembled the one which Bart found to be the most impressive of the ones she surveyed, Bart [1976].

The discussion group for which I was co-leader was one of the two scheduled for evening meetings. Perhaps as a result, we had a particularly open and highly motivated group of students. My co-leader was very good at modeling in the sort of behavior we hoped to elicit from the students, and, since he was also the head of OB-GYN, the message that these behaviors were part of what was expected of a competent doctor could not have been clearer. It was in all respects an excellent teaching situation.

Nonetheless, in spite of the efforts of the course coordinator, the material presented in lecture was usually presented from the perspective of a male subject, often the female was presented only as the object of another's experience, only as seen by another, and female experience was ignored. When the sexual experience of women *was* attended to, the only part of that experience which received attention was the part which was most like male experience. Let me give you two illustrations to bring out my point. In the first year that I was involved with the course, the psychiatrist working in the area of gerontology who gave the lecture on sexuality and aging spent a great deal of time talking about what the aging man experiences in way of change in the angle of erection, decreased volume of ejaculate, increased time prior to ejaculation, and longer refractory period after ejaculation, and the man's possible concern and feelings about these changes. We were then told that of course there were changes for women too, and one could readily tell what they are if one went to the beach (!). There followed a long discussion of the way in which the sun causes wrinkles (as though wrinkling was peculiar to women), with a few words at the end about possible change in the vaginal lining which might cause painful intercourse and which can be relieved by the application of hormone cream. (Some of us pointed out the asymmetry in his presentation, and the second year his presentation was very balanced, and, interesting enough, less popular with the students.)

The point is very simple, but for some reason, it is repeatedly overlooked. It is that the culture's perspective on sexual matters is the male perspective, and in these human sexuality courses it is again male experience and feelings about those experiences that are focused upon. The woman is discussed as she appears to others, as an object of others' experience rather than as subject with her own sexual experience and her own feelings about those experiences. At most, what are presented are a woman's feelings about *how others might be experiencing her* (e.g., finding her less attractive) rather than her own sexual experience, and feelings about that experience.

Given the lack of recognition of the problem of the objectification of women, it may come as no surprise that the *results* of this objectification of women are often misidentified as the norm of female sexual response. This is illustrated in the case of finding that most women are as sexually aroused by the sight of a woman involved in sexual activity as by the sight of a male so engaged. The relevant studies found this to be due, not to a homosexual interest on the part of most women, but rather to a tendency of most women to identify with the female figures they perceive, and be aroused by the sight of a female is then taken to be "normal." It is not thought odd or even notable that women are then given more of the same, that is, more visual representations of women rather than men.

This brings me to my second illustration. I am confident that the organizer for the human sexuality course at Albany Medical College chose the best films available. Nonetheless, of all the many films used in the training sessions for the instructors, and in the lectures, only two, a film on male masturbation and one on male homosexuality, had extended shots of a man's face reflecting his sexual arousal. Now women may regularly have all sorts of visual experience during intercourse, but if one had to choose the single most consistent visual stimulus for heterosexual women, I cannot think of a better candidate than the man's face revealing his sexual arousal[4] (i.e., the visual stimulus which was so notably *absent* in the films). Oddly enough, few people noticed the absence of shots of the man's face, and the great preponderance of camera angles which approximated the view of the male partner exclusively in films of heterosexual couples.

The relative absence of cunnilingus and the multitude of shots of fellatio was much more evident to everyone. However, it is the subtle but pervasive neglect of women's perspective rather than a neglect of some particular technique which does the violence to women as sexual beings. If women's experience were attended to in those areas in which it differs from men's, I dare say issues about techniques would largely solve themselves. However, the reverse is not the case. If, in these courses we concentrate on instructing the students about the techniques which they might recommend, they are not likely to be able to help their female patients become more conscious of, or articulate about, their own sexual experience.

Earlier I said that where a woman's usual experience was dealt with it was only that part of it that is most like a man's. Obviously, in the post-Master-and-Johnson era, no human sexuality course would be complete without attention to orgasm in women and a few pot shots at the assertion that any "normal" woman can achieve orgasm through vaginal stimulation alone, or by being passive in the sexual act.[5] However, although the lecture on female sexuality did not comit the old error of supposing that a woman should be sexually fulfilled by simply acting as a receptacle for the male penis, it committed a new one, that of neglecting all parts of female sexual experience which do not have counterparts in male experience. For example, in the lecture on female sexuality there was no mention of the role of deep pressure (vaginal-cervical) in female arousal (which might, heaven forbid, awaken male anxiety about genital size), or even the role of breast stimulation! Instead, a woman's orgasm was discussed as though it is, or *should* be, just like a man, it *should* occur with stimulation of the homologous organ (*viz.* the clitoris) and *should* occur at least once during the sex act. It seems to me that we must be very cautious about assuming that the woman's experience is, or should be, just like a man's, and that women will be ill-served if practitioners merely replace the myth of the vaginal orgasm with a new set of rigid exceptions drawn from what is known or believed about men's experience.

Why should we devote so much attention to the role of clitoral stimulation in women's sexual experience, or be concerned with what is, even in the statistical sense, "normal" sexual behavior? Our categories for understanding female sexual experience are probably too androcentric to be fully adequate. Isn't it much more important that future clinicians, female as well as male, be acquainted with the *range* of things that women are beginning to articulate about their sexual experience, so that when they become practitioners they will stand a better chance of recognizing what it is that their female patients are trying to say? The articulations are now available in such works as *The Hite Report* (Hite, 1976).[6] Unfortunately, in our course the latter work was only briefly mentioned by the lecturer on sex roles, and ignored by the lecturer on normal sexuality. When it was mentioned, the lecturer was concerned about whether the 3,000 women participating in the study were a representative sample—again the concern with statistical norms, which are not relevant to the purposes of the course.

What about the overall view of sex presented in these courses? To begin with, the course tries to treat sex very casually, as one more physiological process. Presumably the point of this approach is to get over the student's inhibitions about the subject and emphasize the irresponsibility of overlooking important data of possible medical significance. However, sexual behavior is not adequately understood on the model of sneezing and defecating (i.e., simply as a process which may be pleasurable and serves a physiological function). The inadequacy of the latter conception became clear in our course when we treated the subject of sex and medical disability. During this part of the course, we viewed a film showing deep sexual experience between a paraplegic and his wife. Here, the standard elements of male sexual functioning (*viz*., erection and ejaculation) were absent, but depicted experience was certainly sexual. Unfortunately, there was no place in the structure of the course to confront the disparity between the views of sexuality presented and to consider the significance of sexuality in human life. Admittedly, the latter is a difficult topic to treat. However, some recognition of it is in order if we are to prepare students to deal with sexual issues in clinical practice. For, if we teach them to speak to their patients about sexual functioning as though only physiological issues were involved, we will not have taught them how to help patients discuss symptoms, express concerns, and hence how to elicit the information they will need in order to make an intelligent diagnosis or referral. Fortunately, there is a growing literature in philosophy and psychology concerning the meaning(s) of sexuality in human life which may be drawn upon to prepare the student for the views that he or she may encounter in practice.[7]

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3. Bart, Pauline 1976 "From Those Wonderful People Who Brought You the Vaginal Orgasm: Sex Education for Medical Students" presented to the American Psychological Association, 1976. The range of sex education courses which are now offered to medical students is reviewed in this witty and illuminating address. See also "A Survey of Sex Education in U.S. Medical Schools" by HI Lief and RK Ebert in *Sex Education in Medicine.* Edited by H.I. Lief & A. Karlen. New York: Spectrum, 1976

4. Thomas Nagel puts forward as a norm of sexual relation a situation in which two people are aroused by each other, aware of the other's arousal, and further aroused by this awareness (see "Sexual Perversion," *The Journal of Philosophy,* '66 No. 1, and reprinted in Baker and Elliston [1976]). While I do not agree with everything in Nagel's analysis there is certainly something to the view that awareness of one's partner's arousal generally plays a significant role in sexual experience.

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5. Janice Moulton has pointed out in her article "Sex and Reference" that one curious feature of our thinking about sex is that it focuses on intercourse which is *defined* as beginning with penetration by the male and ending with *male* orgasm. Everything else is relegated to the secondary status of foreplay. As she points out, when the paradigmatic sexual act is *defined* in terms of the male experience and activity, it is hardly any wonder that female satisfaction seems like such a problem. (I would add that it is also hardly any wonder that many men experience performance anxiety, when as defined, sexual intercourse is primarily constituted by *their* activity.) Moulton's article appears in Baker and Elliston, pp. 34-44.

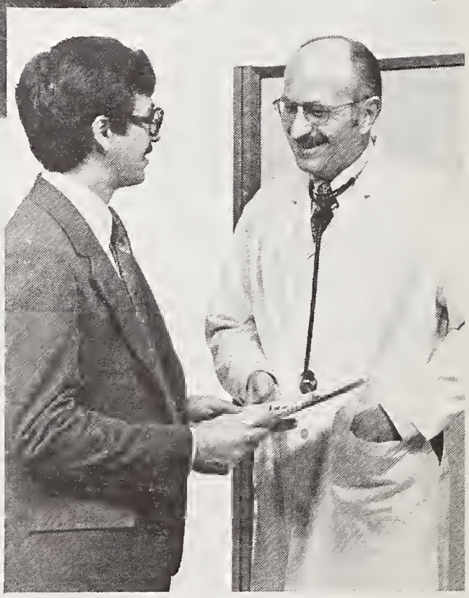
6. Hite, Shere. *The Hite Report.* Dell, 1976

7. Many of the good and bad philosophical treatments are collected in Baker and Elliston [1976]

British MDs Upset with Their Health System

British physicians have become angered by the low salaries paid them through the nation's National Health Service, and are threatening a mass exodus back to private practice, according to officials of the British Medical Association. By American standards, the fees paid to English MDs are startlingly low. A GP earns 60 cents per consultation, a consultant pediatrician $2 for each patient seen, and a general surgeon $4.50 per operation and 30 cents for each patient seen. BMA secretary Dr. Elston Grey-Turner warns, "If the Health Service forces doctors to accept a second-class role, then more and more doctors will find a more justly regarded outlet for their skills in the private sector." He added a criticism of the government for "keeping the incomes of doctors artificially screwed down."

—*Modern Medicine,* July 15-August 15, 1978



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The Future Shape of Health Care

PETER F. DRUCKER

> *The only reason, I suspect, that we still hear of a 'National Health Service' is Sen. Edward Kennedy's—understandable—desire to have his name on one piece of major national legislation.*

President Carter is expected to announce very soon "principles" for major health-care legislation. But the future American health-care system is being built right now, and without benefit of legislation. Mr. Carter's proposals, whatever they might be, can be bluntly called "non-starters." There will undoubtedly be congressional hearings on them with mountains of testimony, studies and reports. But if these produce anything at all, it will be the proverbial "ridiculus mus," the ridiculous, tiny mouse.

The reason for this is not even resistance to the costs of new government programs. It is the total absence of any grassroots pressure for major health-care changes.

It is simply not true that the American people are dissatisfied with the health-care delivery system. The overwhelming majority in any survey—some 90% or so—declare themselves "well satisfied" or "highly satisfied." It is even less true that Americans feel themselves "suffering under the staggering costs of a fee-for-service system," as I heard one of our distinguished Senators orate recently.

Doctors and hospitals are in large part on a fee-for-service basis; patients are not. Nineteen out of 20 of us—around 95% of the population—have a prepayment health plan and do not pay for the services we receive. Indeed, that may be one of the reasons why health-care costs are so hard to control.

The majority of us are enrolled in employment-based plans with the rest being on Medicare or Medicaid. And most of us neither know nor care what our individual health-care insurance costs. It is considered to be "free" in most cases; that is, the costs, as in a National Health Plan, are being paid through a compulsory levy that is pre-take-home pay and pre-income tax.

The only reason, I suspect, that we still hear of a "National Health Service" is Sen. Edward Kennedy's—understandable—desire to have his name on one piece of major national legislation. Even the unions who sign their names to the Kennedy proposal and testify for it, are at best lukewarm. Every one of the union officers and union staffers with whom I have talked wants health-care benefits to remain a bargainable issue which, of course, it would cease to be if we legislated a National Health Service that covers everything for everybody.

Indeed, most union leaders—and even more their staff advisors—see health-care benefits as the *only* area of potential union gains in the years ahead, considering the resistance to wage increases and to higher taxes, and freedom to bargain on health-care benefits as essential to the very survival of the American labor movement.

Health-Care Prediction

While the administration and Congress fight sham battles, the future American health-care system—at least for 95% of the population—is rapidly emerging and can be predicted with very high probability. It will be different from the present one in three aspects:

—in the coverage of health-care costs;

—in its pluralism of health-care deliverers; and

—in its organized control and self-control of medical standards and health-care costs.

Five years hence around three quarters of the American people will have "catastrophic illness insurance"—fewer than 60% have it today. Ten years hence 95% will have it. There will be no "ceiling," that is, no maximum beyond which the insurance does not pay. There is actually no such "ceiling" today—except in the contract. As every hospital knows charges not covered by the catastrophic-illness policy are not collectable.

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But while the incidence of "above-ceiling" costs is quite small, the fear of them is real. We might, however, see a good deal of emphasis on a fairly high deductible—a floor for catastrophic-illness reimbursements—and on some "coinsurance" feature up to a certain amount or to a certain percentage of the insured's family income. And perhaps we will see government reinsurance of catastrophic illness costs for the 5% "noninsurables"—first proposed 25 years ago by President Eisenhower.

Five years hence two fifths of the population—the employes in large companies and governments—will be insured for the costs of prescription drugs, again with a deductible perhaps of $100 a year per family. More important—and more costly—by 1985 or so around half of the families in America will have insurance for dental bills—and by 1990 the great majority will have it. By then also the expenses for the three most common medical appliances—corrective glasses, hearing aids and dentures—will be insured for the majority.

The vehicle for these extensions of coverage will not be law but contracts between individual employers and their employes. Emotional problems will not, however, be covered by most of these contracts. I believe, except in the case of genuine psychotic ailments requiring hospitalization. The cost of psychotherapy is much too high and impossible to control. Despite government assertions that "three out of four" Americans suffer from emotional illness, the belief in the efficacy of psychotherapy has probably crested and may be going down very fast.

Most of the current discussion of health-care delivery is couched in terms of either the individual physician practicing alone or of the "Health Maintenance Organization," a collective of physicians operating out of one central location. But the American health care system of tommorow will consist of three parallel and competing channels of delivery: the private physician, the Individual Physicians Association (IPA) and the HMO.

The bulk of health-care delivery 10 years hence will still be with the private physician, though more and more will have what are (erroneously) called group practices. Next in importance will be the IPA. Employers in certain areas will get together and set standards and fees for medical services, with the help of a medical director or counselor. Physicians who agree to meet the standards and fee levels will be recommended to employes by the IPA.

This is essentially the system that has been working well in Germany for 75 years. It preserves freedom of choice on the part of the patient, but also provides a means of cost and quality control. Such plans already exist in the U.S. and are growing fast.

The HMO, on the other hand, will grow only to the extent to which government imposes it. I used to be a fervent advocate of HMOs. But it may well be an idea whose time has passed, despite fervent advocates in Washington. The IPA does everything the HMO does but without the latter's limitations—that is, the absence of physician choice and a permanent physician-patient relationship. The only cost advantage of the HMO is its ability to concentrate its patients in one centrally managed health-care facility. But in a decentralized country such as the U.S., and with more and more women working miles from their husbands and children, this isn't an advantage at all.

The great attraction of an IPA is that policing of standards will stay within the medical fraternity. The IPA director and medical counsel will decide which physicians will be admitted to practice for the subscribers.

"Peer review" of doctors by doctors in hospitals is growing because of malpractice suits and government pressure. Coming even faster is systematic review of hospital costs by Blue Cross and other insurers, as well as employers and large unions. Ten years hence, large employers, government bodies, IPAs and hospitals will jointly determine medical standards and costs in typically American fashion—disorderly and decentralized.

Some Untruths

It is simply not true that the American health care system is more expensive than any other—it may actually be among the cheaper ones in terms of gross national income and family income. The figures that are bandied about of the "lower costs" of other systems are simply phony—the real cost of the British National Health Service, for instance, is not "under 7% of GNP"; it is closer to 12% considering that the British will have to spend in the next five years almost as much on making good their shortage of hospital beds as they are spending on current health care operations.

It is simply not true that our health care costs have risen faster than those of other countries—they have risen much faster in Germany and in Sweden, for instance. It is simply not true that America uses hospitals more than anyone else. In every developed European country, hospital admissions per thousand population are higher than in the U.S., hospital stays are longer and in most of them the per diem cost is higher.

It may not even be true that health care and especially hospital costs have risen faster than any other major item in America and faster than inflation—that may be true only for those costs, such as Medicaid, imposed by government.

In other words, there are good reasons why the great majority of Americans in every survey declares itself as "pretty satisfied" with its health-care system and why there is no grassroots pressure for more than minor changes in it.

The British National Health Service Reorganization—1974 Strategy for Change or Survival?

ORVAN W. HESS, M.D.

ABSTRACT—1. **The British National Health Service, hailed as a success soon after its adoption in 1948, has failed to adequately meet Public demand for health care both quantitatively and qualitatively. A Royal Commission and study groups considered this to be due to lack of sufficient funds to furnish necessary manpower and facilities and a management structure able to accomplish the task.**

2. **Criticism by the Public and the Profession became so intense in the past decade that it caused the Government to institute changes in the system.**
3. **Reorganization of the National Health Service and changes in the Administrative Structure (1974) have been introduced with the hope for improved "integration of the three main sources of health care."**
4. **Unless the financial inadequacies are resolved, even further drastic measures of retrenchment will be required. If that occurs, it is seriously questioned whether the system will survive despite the unique character of the British Society.**
5. **The necessity for careful planning and assurance of sufficient funds *before* instituting a National Health Care System has been revealed.**

No system of health care has been subjected to more intensive scrutiny and dissection during the last 30 years than that of Great Britain. It is therefore not surprising that, as a part of its commitment to the Profession and the Public to keep abreast of current developments in the health field, the American Medical Association during recent years has arranged seminars on both sides of the Atlantic. These work-sessions have been designed to provide physicians and executives with an opportunity for in-depth study of the British National Health Service and evaluation of its performance. The most recent of these was held in London, England May 12-17, 1978. Forty-two medical leaders, including two AMA Trustees, physicians broadly representative of the Profession and executive officers from 20 States, attended. A topic of special concern at the meeting was the change in the Administrative Structure as a result of the National Health Service Reorganization Act (1973) and its potential effect on various facets of the system. The formal portion of the seminar consisted of a series of reports and discussions with general practitioners and specialists engaged actively in practice, administrators directly responsible for running the health service and representatives of the major political parties. The program, held at the Gloucester Hotel, was interspersed with visits to hospitals and institutions in different settings which permitted an on-site view of actual patient care, the physical plant, and equipment available for clinical diagnosis or laboratory research. Nurses and physicians were interviewed. Others conducted demonstrations of their duties in the active treatment of patients. At a dinner meeting at the House of Commons, the group was privileged to listen to remarks by a Member of Parliament which gave an insight on the degree of politicization of the N.H.S. which has occurred.

A definitive assessment obviously cannot be made on the basis of this limited exposure. Yet a presentation in this manner, augmented by unsolicited "testimonials" of personal care and opinion of the system elicited from citizens from a variety of economic and social strata, makes it possible to weigh previously held personal impressions of the N.H.S. system and formulate a clearer understanding of its

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strengths and weaknesses. The view from such a perspective may differ from that which "living within the system" may partially obscure. Experience of this type is especially valuable for those who are involved in the United States in activities of the HSA, PSRO and other groups currently engaged in planning, quality-assurance, and containment of costs of medical care at a time when identifiable members of Congress are poised to pursue political action for changes in the system existing in the United States which they perceive to be necessary.

HISTORICAL BACKGROUND OF N.H.S.

The evolution of the British National Health Service (NHS) has a very interesting history.[1 2 3 4] Some familiarity with that background is helpful in deciphering the present and potential integration of the N.H.S. in the Society it serves.

Adoption of a full-fledged socialistic system of health care in England in 1948 appeared revolutionary to many observers. In retrospect, however, its genesis may be seen to be related to a long series of movements in that direction which gained momentum in the 19th century. Central Government's concern in health care had manifested itself in 1934 by the enactment of the Poor Law Amendment Act[5] for the purpose, in part, of inducing paupers to seek medical care. The volume of the demand which followed required establishment of many infirmaries and even "state hospitals." Workhouse officers on Government payroll were assigned to provide care of the indigent. Discontent developed among the medical officers who felt they were underpaid and that their services had been downgraded. As industrialization progressed, groups known as Friendly Societies[6] sprung up to collect contributions and act as repositories of funds to provide "insurance" to cover workers' expenses during illness. The early popularity of this movement waned because of uneven distribution of medical benefits and unaffordable premiums. The idea appealed to Lloyd George, who had been impressed by the social insurance system he had seen in Germany. Seeking to provide relief from poverty and to aid the "sick poor," along with his other Welfare objectives, he seized the opportunity during an era of public attitude described as a "tide of social pity" to achieve partial nationalization of health services by passage of the National Health Insurance Act in 1911.[7] The N.H.I. plan, conceived primarily as a means of relieving poverty, ultimately became a government insurance plan covering one half of the population. It failed to meet the demands for extension of basic medical benefits beyond limited general practitioner care and provision of some pharmaceutical agents. Support for any additional benefits, such as hospitalization, was dependent on the size of surplus enjoyed by the approved Society to which the insured belonged. There was no provision for operations or special aids in diagnosis. Years of lethargy and lack of response by the Royal Commission on National Health Insurance to requests of doctors led to general dissatisfaction with this national insurance scheme.

Birth of the National Health Service

Only the severe exigencies of W.W. II could engender innovation and force organization of medical resources under central government control, spread of regionalization and subsidy of hospitals by Public funds. The success of that unifying experience contrasting sharply with the shortcomings of facilities and management of the pre-war system, coupled with the wide impact of Beveridge's Report of his Social Security Scheme in 1943, has been credited with influencing a shift in attitude favoring nationalization in the post-war period. This commonly held attitude strengthened by the devastating economic conditions existing in England, needed only the vigorous effort of Aneurin Bevan and support of the Labor Party to set the stage for acceptance of his proposal for a National Health Service System. The Bill called for:

a "comprehensive, 'free-to-user,' nationalized health service with equal access to all without financial barrier."

THE NATIONAL HEALTH SERVICE 1948 TO 1973

The National Health Service Act of 1946 did not create a nationalized health system de novo—in fact a partially nationalized system (NHI) had existed since 1911. For thirty years, the Profession (particularly General Practitioners and Consultants) and patients had had extensive experience with the Government and Administrators of commercial insurers dealing with problems generated by the National Health Insurance Scheme. Types of benefits, method of remuneration of doctors by means of a capitation fee and limitations of treatment had been widely debated. The General Practitioner, established as the one responsible for the care of his panel of patients, became the basis for delivery under the insurance plan and continued to be the basis of the new National Health Service. There appeared to be no easy solution, however, for reconciling the demands of the special interest groups other than by adapting a tripartite administrative structure similar to the arrangements for the provision of health care in the three categories that had been in operation since 1911, i.e.

(1) Hospital and Specialist Care
(2) Primary Care
(3) Community Care

The system was adopted with enthusiastic bipartisan support. It was acclaimed by many as a model for health care to be passed on to other Nations. Yet, despite the long background of experience with the national insurance program and existence of a framework for operation, implementation was extremely slow, either by design or fortuitous circumstances. At the time of our visit, nearly thirty years after inception of the N.H.S., the original goals of the Bevan Dream had not yet been achieved. As early as the Sixties, old unresolved issues surfaced[8, 9] and there was general complaint that the N.H.S. was failing to cope with demands placed on the system. It was quite clear, it was explained, that there had been miscalculations of the vast need and enormous cost of health care.[10] It was felt that the Government had over-reacted. Too much emphasis had been placed on the containment of expenditures to provide adequate facilities and meet demands of professional personnel. The tripartite plan, we were told, had been too cumbersome to effectively coordinate the three main sources of service and had become the target of widespread criticism.

OBSERVATIONS OF CURRENT N.H.S.

Some aspects of the working of the N.H.S. which we learned to be continuing into the Seventies may be summarized as follows:

1. Patient Care and Attitude. Patients do not complain of costs—the GP's care, the Consultant's fee, hospital services, and most medicines are all "Free"—or almost free—except for the overwhelming tax bill! Patients *do* complain—often bitterly—about impersonal treatment, the queues, the waiting for office visits with GPs and Consultants. In 1971, 561,000 were found on lists waiting for hospital care. The waiting period may be months or years—or even too late—for a hernia repair, gallbladder operation or important diagnostic procedures when cancer is suspected. This delay is perceived to be a buffer to stabilize hospital bed usage and a method of utilization control to reduce cost. The GPs whom we met attributed the delay to their heavy workload. Consultants blamed it on the lack of sufficient nursing staff and allied hospital personnel to cope with the demand. The kind of care the patient receives when he reaches the GP is of great interest. One reason the GP's office practice seems to resemble "morning sick call" is related to manpower. Each N.H.S. doctor has 2,500-3,500 patients on his "list." Sixty percent also have private patients. About 3 - 7 minutes is devoted for each office visit. Patients report that during only 45-55 percent of the visits does the doctor make any examination. Laboratory tests are infrequently ordered. Prescription writing is a cherished right which has recently been restricted because the government found it too costly. If a patient appears to need a time-consuming interview or has a complicated problem, he is often referred to a Consultant usually stationed at a hospital. Unless the patient is on that Consultant's list of Private Patients, the chances are that the appointment will be delayed or passed on to a junior staff person. This may be "irritating or even detrimental to the health of the patient" in the volunteered opinion of an elderly apartment dweller tending her flower garden in a London compound. The patient has little control over this "inconvenience" and equally little voice on the kind of care he is receiving. He usually has little basis on which to make a judgment of its quality. He is on the doctor's list and it is *this* doctor's care to which he is entitled under the N.H.S. A survey in 1975 revealed that of the 25,000 GPs permitted to provide care, nearly 50 percent were graduates of foreign schools, mainly India, where there are no ECFMG examinations. Of 20,000 hospital doctors, 9,000 were foreign trained.[17] The manpower need is such that it is rare to refuse to accept an applicant who has fulfilled the required one month's attachment to a Consultant. The Government makes little effort to control the quality of care. Peer review or other methods of accountability do not exist. If the patient is dissatisfied, he may appeal to an Area Health Authority or go to another doctor if he can find one on the list on file in the Post Office who will take him. A doctor may refuse to accept or discharge a patient from his list at any time. It seems quite obvious to me that assurance of quality of the health care of the British people leaves much to be desired. From conversations with GPs, it is my impression that much of their time is spent in dealing with psycho-social factors influencing the demand for medical care.

2. Status of the General Practitioners. Although it is said that GPs are reasonably satisfied, there are signs of restlessness as evidenced by the serious threats of a general strike in 1965. Essential to the system and considered a cheap way to provide primary care, GPs have been pampered by the Government. The role of Family Doctor has given them a feeling of greater responsibility to the patients on their lists and closer relationship to total Community Medicine. Privately, they complain chiefly of poor pay, boredom, isolation from other professional group activities, and heavy workloads. A Practitioner in the Bristol area felt the use of an appointment system has helped him to regulate his chaotic schedule but patients still complain that they have to wait too long. This he feels is a threat to his practice.

3. The Consultants, hospital based, may contract with the Government to serve on a full-time or part-time basis. Most have elected part-time which allows them to have a list of private patients to increase their earnings. One survey found that Consultants derive

A summary of AMA, medical & health news

Despite mounting inflation in the economy in general, the Voluntary Effort is succeeding in holding down the rate of increase in hospital expenditures, officials of the voluntary program said at a news conference in Washington, D.C. The Voluntary Effort, initiated by the American Hospital Assn., the Federation of American Hospitals, and the AMA, seeks to reduce the rate of increase in hospital expenditures by 2% a year for the next two years. Hospitals and physicians have been able to approach the problem in a flexible way most appropriate for the individual institutions, AHA President Alex McMahon said. The private sector has "clearly demonstrated" that it can handle the task of curbing rising costs, AMA EVP James H. Sammons, MD, added.

The AMA told the government's Council on Wage and Price Stability that "for the good of the individual patient and for the good of the economy as a whole," the medical profession "will continue to seek to restrain cost increases not essential to good patient care." The Council had asked the AMA to encourage physicians to keep the rate of fee increases "to the average increase in other goods and services." The AMA pointed out that even before the COWPS request was received, AMA President Tom E. Nesbitt, MD, in his inaugural address at the AMA's Annual Convention, had urged physicians to restrain their rate of fees increases by 1% in each of the next two years.

The AMA's Center for Health Services Research and Development is conducting its 12th annual Periodic Survey of Physicians. The AMA conducts the study to maintain current and reliable information on the practice of medicine. Survey results are published yearly in *Profile of Medical Practice* ("Red Book"). All responses are handled in strict confidence and only aggregate figures are published.

AMA Membership dues will be cut in half for one year for physicians first entering practice. The action by the House of Delegates followed extensive research by the Board of Trustees on the financial and membership impact of the proposal.

(continued on page 678)

Librax®

Each capsule contains 5 mg
chlordiazepoxide HCl and 2.5 mg clidinium Br.

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma; prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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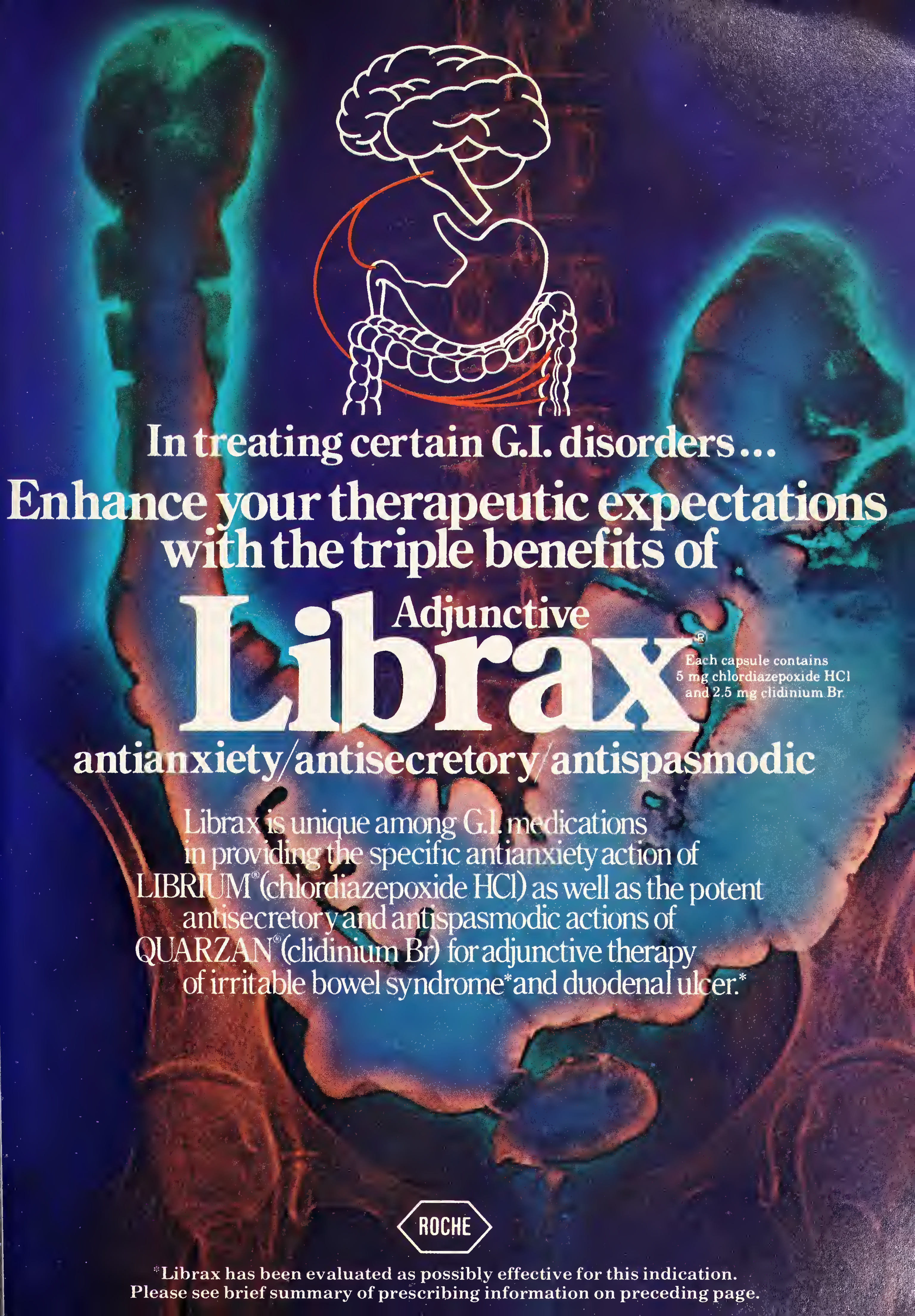

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antianxiety/antisecretory/antispasmodic

Librax is unique among G.I. medications in providing the specific antianxiety action of LIBRIUM® (chlordiazepoxide HCl) as well as the potent antisecretory and antispasmodic actions of QUARZAN® (clidinium Br) for adjunctive therapy of irritable bowel syndrome* and duodenal ulcer.*

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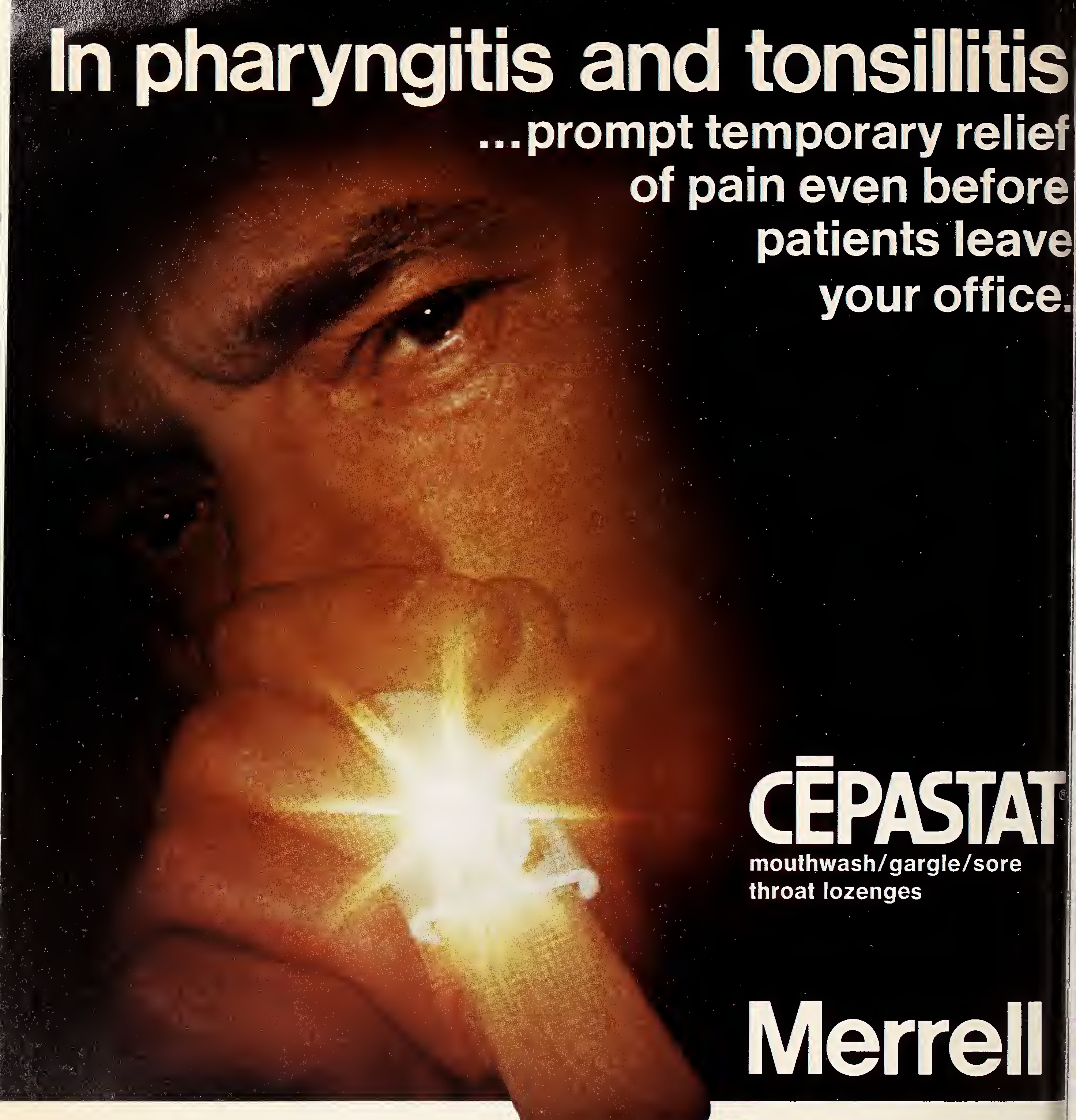

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Spraying the throat with CĒPASTAT brings soothing relief within minutes. Your patients will appreciate this relief while waiting for therapeutic measures to take hold. The well-established anesthetic effects of CĒPASTAT provide soothing temporary anesthesia to the irritated or inflamed oropharyngeal mucosa.

CĒPASTAT in your treatment room . . .

Used as a spray, CĒPASTAT is more likely to deliver the most relief to the painful area of the throat.

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The liquid is best for use at home as a spray or gargle. Lozenges are ideal for patients on the go.

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20 percent or more of their income from Private Practice. This privilege is being acutely threatened as the number of N.H.S. beds available for use by private patients has been recently reduced by twenty percent.[11] Such action increases the dissatisfaction of the Consultants with their low income[8] which is less than half that of their U.S. counterparts. For this reason, about 15 percent emigrate yearly. To induce Specialists to remain in England, it has been necessary to grant awards of $2,500 to $12,000 to individuals for outstanding service in their field.

4. The Hospital Situation has been described as pitiful. Many hospitals are old and one finds conditions comparable to those that exist in a few city hospitals built in another generation in the U.S. One may have nostalgia for such century-old buildings as were seen in a visit to Amersham General Hospital but they are inefficient from a medical point of view. The average age of N.H.S. hospitals was noted in 1969 to be 70 years. It would be difficult to find nurses and other health professionals in the U.S. who would work under the unsatisfactory conditions we saw. Teaching hospitals such as Westminster Hospital observed in the London area are somewhat better off. Nevertheless, the laboratory, diagnostic ECG, X-ray and other equipment appears antiquated and almost unusable. It was pointed out to us that, after submission of a Hospital Plan[12] (1962) belated spurt of new construction occurred. Yet in 1971, the total number of beds in all hospitals was 450,000 as opposed to 453,000 in 1949. The financial outlay for hospital construction which amounted to 7 percent of the capital expenditure in 1958/59, reached 37 percent in 1969. In 1973 appropriations were halted abruptly. A few voluntary for profit hospitals have been improved or built with funds from outside sources to accommodate patients who prefer care by Private Practice doctors. The Wellington Hospital is an exceptional example of this trend. Such hospitals, providing more desirable environments, pose the possibility of aggressive demands for improvement of Public hospitals. Already completion is felt as patients requiring special procedures or use of high technology are siphoned off. This could have a deleterious effect on the training, availability and distribution of specialists, and allied personnel for Public Institutions.

THE N.H.S. REORGANIZATION ACT OF 1973

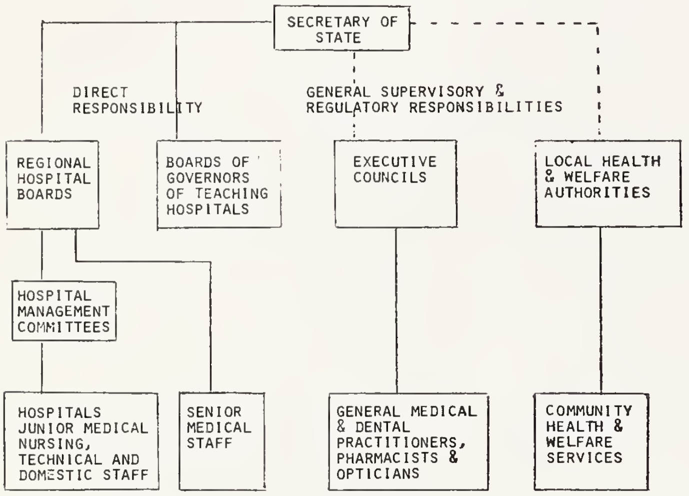
The groundswell of criticism of the N.H.S. began in the Sixties and continued to grow and center mainly about two aspects:

1. Lack of appropriation of sufficient funds to meet the increasing expenditures. There had been marked underestimation of costs and failure to allow for inflation. Expenditure rose from $200 million in 1960 to $2.5 billion in 1971. The need for new hospitals was seriously considered in the late Sixties and construction was begun after long delay. The cost reached a point where the Government, hard-pressed for funds, stopped all plans for new construction in 1973 as an austerity move. GPs and Consultants, dissatisfied with the level of their income, have repeatedly sought increases with little success.

2. Managerial inefficiency of the tripartite administrative structure. The administrative structure lacked the ability to coordinate the three chief components of Health Care Delivery. This failure of integration had resulted in duplication or gaps in provision of care particularly among geriatric, chronically ill and mental patients.

On the basis of recommendations contained in a series of "papers" by a variety of investigators,[13] [14] [15] [16] by the Royal Commission appointed by the Ministry, and by an American consulting firm, a Bill calling for Reorganization of the Administrative Structure was passed in 1973 and put into operation on April 14, 1974 after the Labor Party came into power. Under this new structure the Department of Health and Social Security became overseer of the entire system consisting of 14 Regional, 90 Area Health Authorities and 270 District Management Teams when fully established. The previous arrangement was dropped in favor of a "closely articulated multi-tier, geographically integrated organization." In the structure "professional advisors (over 200 administrators) will give expert advice to the management boards—their presence allows the medical profession to be consulted on decisions related to all aspects of the Health Services." The table of organization is complex and lends itself to bureaucratic pitfalls. Each District (the basic local unit which covers a population of 250,000) will be managed by a District Management Committee consisting of an Administrator, a Finance Officer, a Nursing Officer and two elected representatives of the Medical Profession (1 G.P., 1 Consultant). A Family Practitioner's Committee will sift applications for positions in the Areas but the Medical Practice Committee will be directly responsible to the Secretary of State who will make the final decisions.

The Reorganization (1974) is seen as a reaction to the criticism of the deficiencies of the system which has resulted in a failure, bordering on a hoax, to fulfill the promise to the British people of "comprehensive health care, equal access, without financial barrier." Does the Act represent a conscientious attempt to improve the system and provide better health care or is it merely a maneuver to place responsibility for ultimate success or failure on the shoulders of local health areas? We were told by a member of the Planning Division that the new structure will allow greater input from the local levels. However, the responsibility for the coordination of planning and monitoring the entire system will remain with the Department of Health and Social Security reporting to the Secretary of State (Figure 1). Much will depend on the determination of priorities and distribution of financial support through Regional Health Authorities (RAWP)* which is largely a political affair. Finally, expenditures are limited by an annual fixed allocation by the Treasury.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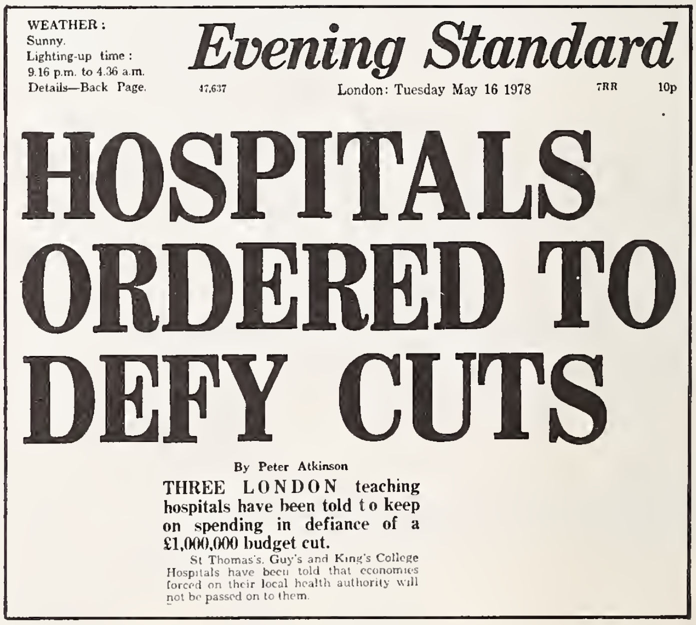
HOSPITAL MANAGEMENT COMMITTEES
HOSPITALS JUNIOR MEDICAL NURSING, TECHNICAL AND DOMESTIC STAFF
SENIOR MEDICAL STAFF
GENERAL MEDICAL & DENTAL PRACTITIONERS, PHARMACISTS & OPTICIANS
COMMUNITY HEALTH & WELFARE SERVICES

Figure 1
Administrative Structure of the National Health Service in England and Wales.

It is too early to discern the objectives of the new program and even more difficult to predict their ultimate effect on the System. Some indication of things to come may be found in statements and recent actions of Mrs. Castle, the new Secretary of State. If I were to offer predictions, it would seem to me that some actions which will be taken in implementing the plans of reorganization are:

1. Continue to upgrade the stature and involvement of the General Practitioners. The institutionalization of this body of loyal employees is considered a major accomplishment of the N.H.S. The GPs perform the basic role of triage and determine access to the system—a method of control of expenditures which is of primary importance to the Exchequer. They have functioned with little Government supervision. Attempt may be taken to establish practice standards and monitor their performance. Effort will be made to extend their service capability and bring them into the mainstream of medicine. Group practice is being promoted. Construction and financing of Health Centers are occurring at a rapid pace—468 now exist and 150 more are planned. It is anticipated the additional services provided at that level will decrease the number of referrals to hospital Consultants and lessen cost.
2. De-emphasize the role of Consultants and the need to utilize their services as specialists. Advantages of the use of new technologies for diagnosis and treatment will be ignored even more than at present in the interest of presumed cost-containment.
3. Attempt will be made to eliminate Private Practice entirely by increasing incentives for Consultants in hospitals to work for N.H.S. on a full-time basis. Part-time arrangements will be made less attractive to Specialists by eliminating N.H.S. beds now available for their use for private patients. Nurses will be encouraged in their opposition to providing nursing services for private patients in N.H.S. hospitals.
4. "Geographic equalization" of access will be attempted by a change in pattern of distribution of funds to Health Service Areas by a highly politicized RAWP. Already reduction in funds for three renowned teaching hospitals in the London vicinity (St. Thomas', Guy's and Kings College) threatens their continuation and the production of highly qualified practitioners. (Figure 2) The fact that technological advances and changes in medical practice have increased the necessity for properly trained specialists has been discounted. The standards of high quality of past research in England will suffer from lack of financing. In response to a direct question by A.M.A. Trustee, Dr. Ballantine, a Government spokesman admitted that "the Aim for Excellence has been supplanted by the Acceptance of Mediocrity."


WEATHER:
Sunny.
Lighting-up time:
9.16 p.m. to 4.36 a.m.
Details—Back Page.

Evening Standard

47,637 London: Tuesday May 16 1978 7RR 10p

HOSPITALS ORDERED TO DEFY CUTS

By Peter Atkinson

THREE LONDON teaching hospitals have been told to keep on spending in defiance of a £1,000,000 budget cut.

St Thomas's, Guy's and King's College Hospitals have been told that economies forced on their local health authority will not be passed on to them.

Figure 2
Evening Standard article entitled "Hospitals Ordered to Defy Cuts."

5. Rationing of funds and determination of priority of services on the basis of cost-benefits will be accentuated. Application of this policy has been felt in special care of the elderly. It has been implied that a cut-off age of 60 will be established for dialysis of patients with chronic kidney disease. Of 2,000 who develop renal failure each year,

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*Resource Allocation Working Party

nearly one-half will be unable to obtain this form of treatment necessary for survival (Figure 3). A cat scanner is on display in the National Museum and is exploited as of great benefit to the Public. Although the apparatus was developed in England, we were told that only 2 or 3 cat scanners had been available for Public use until recently.*

6. Some type of cooperative arrangements will be made in an attempt to stem the tide of increasing demand for private care in N.H.S. hospitals as well as in voluntary hospitals. The full extent to which the public will elect this alternative type of care is unknown. It is estimated that 2 million persons are enrolled now for health insurance coverage. A British Medical Association executive has said that about 75 percent of the bills for these patients is paid for by insurance plans such as BUPA.**

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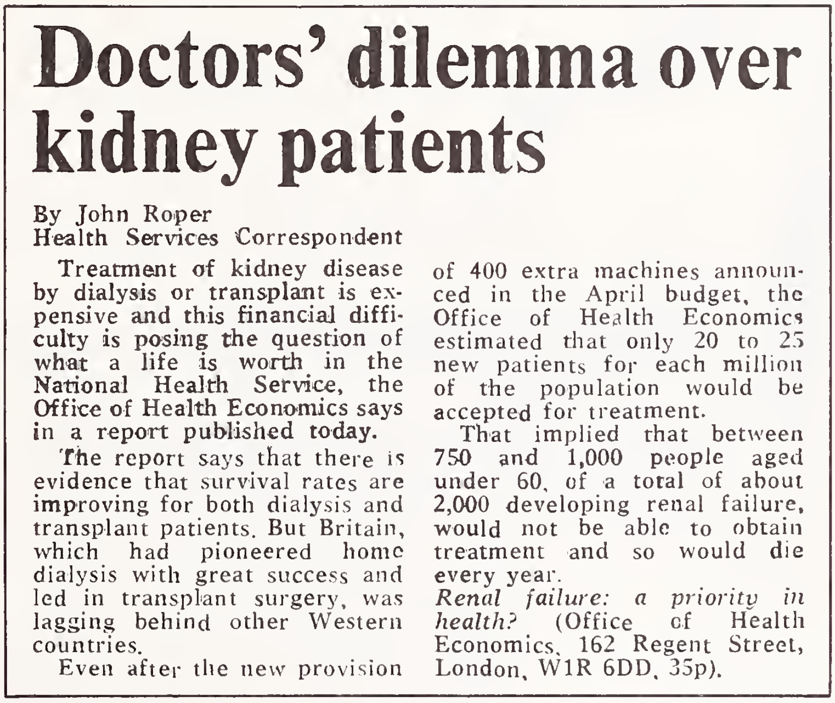
*4 or 5 have been added this year.

**British United Provident Association



Doctors' dilemma over kidney patients

By John Roper
Health Services Correspondent

Treatment of kidney disease by dialysis or transplant is expensive and this financial difficulty is posing the question of what a life is worth in the National Health Service, the Office of Health Economics says in a report published today.

The report says that there is evidence that survival rates are improving for both dialysis and transplant patients. But Britain, which had pioneered home dialysis with great success and led in transplant surgery, was lagging behind other Western countries.

Even after the new provision of 400 extra machines announced in the April budget, the Office of Health Economics estimated that only 20 to 25 new patients for each million of the population would be accepted for treatment.

That implied that between 750 and 1,000 people aged under 60, of a total of about 2,000 developing renal failure, would not be able to obtain treatment and so would die every year.

Renal failure: a priority in health? (Office of Health Economics, 162 Regent Street, London, W1R 6DD, 35p).

Figure 3
The Times article entitled "Doctors' dilemma over kidney patients."

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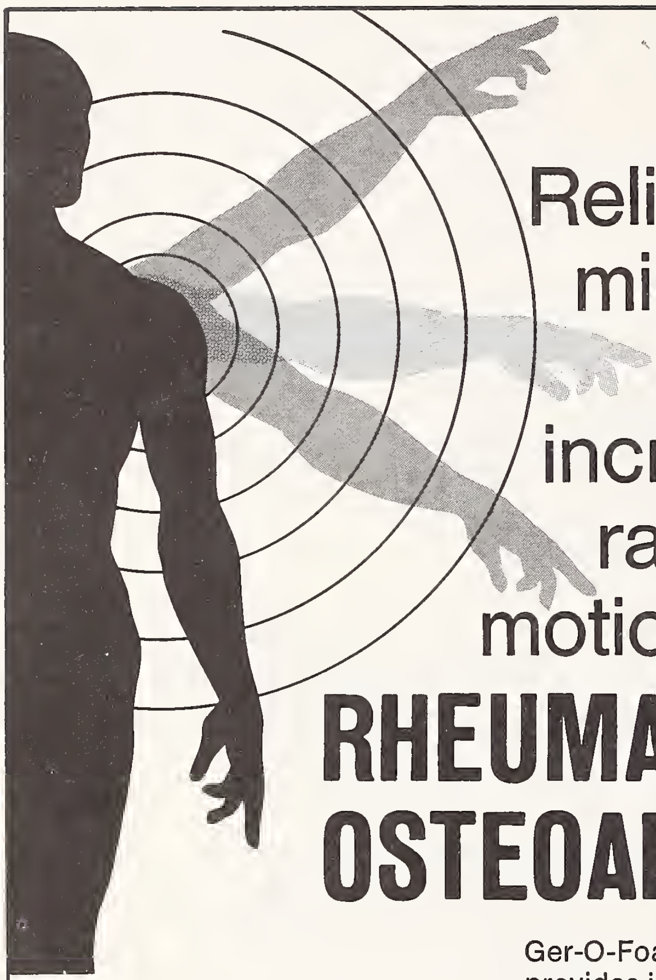

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1. Gordon, E. E. and Haas, A., Indust. Med. & Surg. 28:217, May, 1959.

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Principles of National Health Plan

PRESIDENT JIMMY CARTER

ABSTRACT—This is the complete, unedited text of President Carter's statement of principles on national health insurance as sent to HEW Secretary Joseph Califano.

I have consistently expressed my support for the goal of a universal, comprehensive national health plan to contain skyrocketing health costs and to provide all Americans with coverage for basic health services and with protection from catastrophic expenses.

Such a plan would be the cornerstone of a broader national health policy designed to improve the health of Americans by reducing environmental and occupational hazards and encouraging health enhancing personal behavior, as well as by improving the effectiveness of our medical care system.

The current health care system has significant defects which must be remedied:

- The health care system is highly inflationary. Spending in the health care industry—the nation's third largest industry—has been rising at an annual rate of 12%, with little improvement in the health of Americans. These expenditures cannot be successfully contained under current health delivery and financing methods, which produce unnecessary hospitalization, over-reliance on expensive technology and inadequate preventive care.
- At least 20 million Americans have no health insurance.
- Another 65 million Americans face potential bankruptcy because they lack insurance protecting them against catastrophic medical expenses.
- Health resources are unevenly distributed across the country, resulting in significant gaps in vital medical services for many residents of rural and inner city areas.

In pursuing the goal of a comprehensive national health plan, I also wish to draw on the strengths of the American health care system:

- American health care professionals and hospitals are among the finest in the world and deliver dedicated, high quality medical care.
- A growing number of Americans have private health insurance. American business increasingly is paying for health coverage for its employees.
- Various government programs have provided an opportunity for millions of elderly, poor and geographically isolated Americans to obtain quality health care.

In past months you and other members of my Administration have been exploring the most effective means of fulfilling my commitment to a comprehensive national health plan. You have considered a broad range of options. However, before I submit legislation to the Congress, I want to be certain that the plan is consistent with our efforts to control inflation in the health care sector and the general economy. Before you send me final recommendations for a national health plan, you should analyze the issues of cost control and health system reform in greater depth. The American people would not accept, and I will not propose, any health care plan which is inflationary.

At the same time, the American people must recognize that if we fail to act, health expenditures will continue to soar. In 1977, health expenditures were $162 billion; they are expected to reach $320 billion by 1983. A comprehensive national health plan will provide a critical opportunity to mount a national effort to bring the system under control.

I am directing you to address these concerns as you proceed to develop in greater detail a national health plan for the American people. The plan must improve the health care system, and combat inflation by controlling spiralling health care costs. To achieve these objectives, the plan, when fully implemented, should conform to the following principles:

1. The plan should assure that all Americans have comprehensive health care coverage, including protection against catastrophic medical expenses.

2. The plan should make quality health care available to all Americans. It should seek to eliminate those aspects of the current health care system that often cause the poor to receive substandard care.

3. The plan should assure that all Americans have freedom of choice in the selection of physicians, hospitals, and health delivery systems.

4. The plan must support our efforts to control inflation in the economy by reducing unnecessary health care spending. The plan should include aggressive cost containment measures and should also strengthen competitive forces in the health care sector.

5. The plan should be designed so that additional public and private expenditures for improved health benefits and coverage will be substantially offset by savings from greater efficiency in the health care system.

6. The plan will involve no additional federal spending until FY 1983, because of tight fiscal constraints and the need for careful planning and implementation. Thereafter, the plan should be phased in gradually. As the plan moves from phase to phase, consideration should be given to such factors as the economic and administrative experience under prior phases. The experience of other government programs, in which expenditures far exceed initial projections, must not be repeated.

7. The plan should be financed through multiple sources, including government funding and contributions from employers and employees. Careful consideration should be given to the other demands on government budgets, the existing tax burdens on the American people, and the ability of many consumers to share a moderate portion of the cost of their care.

8. The plan should include a significant role for the private insurance industry, with appropriate government regulation.

9. The plan should provide resources and develop payment methods to promote such major reforms in delivering health care services as substantially increasing the availability of ambulatory and preventive services, attracting personnel to underserved rural and urban areas, and encouraging the use of prepaid health plans.

10. The plan should assure consumer representation throughout its operation.

I am directing you to develop a tentative plan as soon as possible which embodies these principles and which will serve as the basis for in-depth consultation with the Congress, State and local officials, interest groups, and consumer representatives. You should then provide me with the detailed recommendations so that I can make final decisions on the legislation I will submit to the Congress next year. To respond fully to my economic and budgetary concerns, you should develop alternative methods for phased implementation of the plan.

NOTICES

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Morton I. Burrell, M.D.—Associate Professor of Diagnostic Radiology, Yale School of Medicine

Joseph G. Fortner, M.D.—Chief, Gastric and Mixed Tumor Service, Memorial-Sloan Kettering Institute

Birgir Gudjonsson, M.D.—Gastroenterology Service, State University of Sudurgata, Reykjavik, Iceland

Arthur H. Knowlton, M.D.—Associate Professor of Therapeutic Radiology, Yale University, School of Medicine

Philip S. Schein, M.D.—Chief, Division of Medical Oncology, Lombardi Research Center, Georgetown Medical School

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Consumer Price Index

TED LEWIS, JR.

The Consumer Price Index, the most widely-used gauge for measuring inflation, may hold the key to government controls on hospitals and physicians. The Medical Care portion of the Index will be watched carefully in the months ahead to determine whether the Voluntary Effort is able to restrain rises in hospital costs. Failure to do so could trigger mandatory Federal cost controls if the Administration is able to steer a bill through Congress. Administration officials have warned that controls on hospitals could be followed by controls on physicians' fees.

The CPI measures changes in prices for goods and services urban consumers purchase with their net income. The focus is thus quite narrow. The Index does not purport to be a true cost of living guide. For example, sharply higher beef prices would drive the Index up substantially (food prices are a major item) even if consumers shunned beef because of the price. The Index plays an important role in cost-of-living labor contracts, and in labor negotiations, and is used by the Federal government in adjusting pension benefits.

A function of the Labor Department's Bureau of Labor Statistics, (BLS), the CPI is regarded as a fairly accurate barometer of prices, but there has been considerable debate among economists about methodology and whether there are upward or downward biases.

This is especially true in the health field which has the complicating factor of private health insurance. (The extraordinarily difficult question of how to measure (quality) improvements in health arises in the revisions of the Index undertaken every 10 years or so.)

The BLS has the reputation of being one of the government's crack outfits; there have been few charges of political manipulation or influence during the 50-year existence of the CPI.

Many of the criticisms made of the medical care Index by hospitals and physicians have been quieted with the new CPI that has been out since January and that supplanted entirely the old CPI last July, (1978).

If federal controls are placed on hospital revenue increases, the CPI would not be employed to monitor hospitals' performance. Rather, the Health, Education and Welfare Department would set up its own Index based on hospital revenues and other factors not covered by the CPI.

The prices of about 400 goods and services, including medical, are obtained by personal visits, mail questionnaires and telephone calls to about 18,000 establishments in 85 urban areas. More than 200 CPI employees devote full time to this pricing.

During the first half of this year, 2,200 physicians were reporting their fee changes for the physicians' fee Index. Their identities are confidential and their cooperation voluntary. Before this year, the number of reporting physicians was 1,455. A new group of 750 physicians was added in January, this smaller group became the physicians' total reporting sample after July.

In calculating the CPI, prices are averaged with weights which represent the items' relative importance in the spending of urban wage-earners. With a "market basked" of 100, the weight assigned medical care last December in the new Index was 4.49 which roughly speaking means that consumers spend $4.49 of each $100 of "spending" on medical care.

Interestingly, the new CPI registers a sharp drop in the weight for medical care, down from the 6.89 in the old CPI. The reason largely is the growth of employer-paid private health insurance and the increase in the employers' contributions which are counted as income rather than expenditures. Employee payments for health insurance are factored into the equation only if the premium change reflecting higher or lower medical care costs or added administrative costs for the insurors. Benefit and utilization changes causing premium price changes are not considered.

The CPI comes out every month. Physicians' fee data is collected monthly, but the reporting physicians are each contacted only four times a year for price changes on a few of their key services.

The medical care Index is based on the price of items broken into three major categories—drugs and prescriptions, professional services, and hospital service charges. The professional service Index includes physicians' fees, dentists' fees, and other professional services. Out of the 4.49 December Index for all medical care, professional services accounted for 1.92; other services including hospital charges, 1.80; and commodities such as drugs, 0.78.

Although the largest single cost factor in health care is the hospital bed charge, the CPI does not reflect this because health insurance picks up a large portion of this charge for the average urban wage earner. Some critics maintain that the hospital charge is weighted too low and CPI does not take into account substantial out-of-pocket payments that many people must make despite insurance.

The single most significant health money figure is that for total spending, public and private, and the percentage this represents of the gross national product. The CPI does not attempt to reach such statistics, omitting completely, for example, the amount of taxes people pay that goes for health benefits.

MR. TED LEWIS, JR. Assistant Director, Communications Department, AMA, Washington, D.C.

For many years, the CPI checked seven physician services—General Physician office and house visits, obstetrical cases, pediatric office cases, psychiatrist office visits, adult herniorraphy, and tonsillectomy and adenoidectomy.

Under the new, more sophisticated CPI, physicians have been broken down into eleven categories—general medical practice, pediatrics, obstetrics and gynecology, cardiology, ear, nose and throat, allergy, surgery, psychiatry, radiology, orthopedic and other. Within each category, eight services have been selected for pricing, except for general medical practice which has 16 priced services.

No attempt is made to take into account the amount patients may be reimbursed by health insurance. The insurance offset is considered in the weighting only. If the entire urban population was covered by private health insurance paid for in full by employers and providing first dollar coverage for all expenses, medical care would fall off the CPI as a category representing consumer expenditures.

The American Medical Association this year published a detailed critique of a charge that physicians' fees are too high. The accusation was made in a report by a staff economist on the Administration's Council on Wage and Price Stability.

In its reply, the AMA discussed the CPI, stating that there are "some inherent limitations" in the Index.

"First, since the CPI is based on the expenditure patterns of a subset of the U.S. population, changes in the CPI must be interpreted cautiously," said the AMA. "Second, since the CPI is based on a sample of prices, CPI figures are subject to sampling error. Third, the CPI methodology may inadequately account for quality changes, and thereby, limit the usefulness of the Index for long term comparisons."

As a handy and timely guide to the way consumer prices are running in the economy the CPI is invaluable, but by no means can it be said to represent a clear and concise picture of the economics of health care.

APPENDIX

Categories and Services Included in the Consumer Price Index

General Medical Practice: brief adult office visit, brief child office visit, adult initial care hospital visit, adult subsequent care hospital visit, brief adult home visit, adolescent emergency department visit, comprehensive consultation, routine newborn care hospital visit, electrocardiogram, blood count, urinalysis, cytopathology (pap smear), radiologic exam of forearm, radiologic exam of upper gastrointestinal tract, basic audiometry screening test, and basic metabolic rate measurement.

Pediatrics: annual care visit, brief office visit, brief service office visit, routine newborn care hospital visit, immunization for polio, tonsillectomy, hernia repair, PKU blood test.

Obstetrics and Gynecology: brief office visit, total obstetrical care, total hysterectomy (corpus and cervix), biopsy of vaginal mucosa, insertion of intrauterine device, dilation and curettage (non-obstetrical), treatment of incomplete abortion, pregnancy test (chorionic gonadotropin).

Cardiology: intermediate service adult office visit, extensive consultation, electrocardiogram, cardiovascular stress testing, radiologic exam, cardiac catheterization (complete procedure), exploratory cardiotomy, repair of blood vessels, repair of aneurysm.

Ear, Nose and Throat: adult limited service office visit, speech therapy, rhinomanometry test, basic comprehensive audiometry test, tonsillectomy and adenoidectomy, excision of nasal polyp, removal of foreign body from external auditory canal, laryngotomy.

Allergy: brief service office visit, percutaneous tests, immunotherapy, infusion therapy, direct bronchial mucous membrane tests, sensitivity test for cat scratch fever, climatotherapy counseling.

Surgery: (general, abdominal, neurological, thoracic, urological) appendectomy, hernia repair, excision of cyst, TUR (transutherae resection), small thoracotomy for biopsy, lymphadenectomy (axillary), nephrectomy (partial), spinal puncture (tap).

Psychiatry: diagnostic interview/examination, psychological testing, medical psychotherapy (individual), medical psychotherapy (non-family group), chemotherapy management, subconvulsive electric shock therapy, medical hypnotherapy, daily hospital care.

Radiology: radiologic exam of chest, of ankle, of upper gastrointestinal tract, urography (antegrade), echography (fetal age determination), radiotherapy, radioiodine uptake study, radionuclide therapy of hematologic and lymphoid malignant disease.

Orthopedics: adult rib fracture office visit, child shoulder dislocation office visit, child closed reduction ulnar fracture office visit, adult laminectomy surgery, adult total hip surgery, adolescent knee ligament repair surgery, child torticollis surgery, adult surgery for atrophied torn ligament, ankle.

Other specialities: (dermatology, endocrinology, gastroenterology, hematology, urology, neurology, pathology, pulmonary disease, plastic surgery).

Other: adult minimal service office visit, child brief service office visit, adult initial care hospital visit, adult subsequent care hospital visit, adult limited service home visit, adolescent intermediate service emergency department visit, comprehensive consultation, routine newborn care hospital visit.

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Demonstrated smooth muscle relaxant activity.

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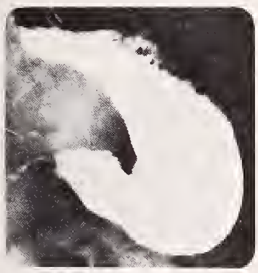
. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



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*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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INDICATIONS
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IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHOLINERGICS/ANTISPASMODICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHOLINERGIC/ANTISPASMODIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION.

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders); and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: autonomic neuropathy; hepatic or renal disease; ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon; hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension; hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness, insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION: Dosage must be adjusted to individual patient's needs.

Usual Dosage Bentyl 10 mg. capsule and syrup: *Adults* 1 or 2 capsules or teaspoonfuls syrup three or four times daily *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants.* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg.. *Adults.* 1 tablet three or four times daily. Bentyl Injection: *Adults:* 2 ml. (20 mg.) every four to six hours intramuscularly only NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

Product Information as of October, 1976

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A summary of AMA, medical & health news

(continued from page 668)

Health care providers and hospitals are widely respected and much more highly regarded than all other major private sector and governmental institutions, a Harris poll conducted for Hospital Affiliates International–the nation's largest hospital management firm— has found. The Harris study included interviews with a national cross-section of 1,503 adults and representative samplings of physicians, hospital administrators and trustees, executives of health insurance companies, and congressmen on health-related committees. Of those polled, some 60% indicated more money should be spent on health care—even at the expense of welfare and defense.

The AMA supported legislation which would extend for one year special payment to eligible physicians and dentists in the VA health care system. In a letter to the House Subcommittee on Medical Facilities and Benefits, the Association urged congressional efforts "to provide more adequate and equitable compensation" for physicians and dentists in the program.

The AMA urged the private sector to "continue to work to expand private health insurance availability and coverage, to maintain quality of care, and to voluntarily restrain the cost of care." In a statement to the press following the announcement of President Carter's NHI principles in July, AMA EVP James H. Sammons, MD, said that "many of the NHI principles announced by the President seem to be consistent in whole or in part with similar principles that have been endorsed by the American Medical Association." But, he added, "We have reservations about a reference to the need for a major reform to the health system without a better understanding of the details of that reform. We agree with the need to restrain increases in the cost of care. . . In any such program care must be taken that quality and access to care are not adversely affected."

Blue Cross and Blue Shield Assn. approved a three-year plan aimed at improving their share of the health insurance market. The priority recommendation is a redesigned national master contract, a Blues official said, with serious consideration to be given to cost-sharing features.

Physicians and their spouses are serving in state legislatures across the country. To date 36 medical family members in 24 states hold state house or senate seats.

Peer Review: A Maryland Case

WILLIAM P. ISELE, J.D.

A decision of the Maryland Court of Special Appeals and a statute recently enacted by that state's legislature have provided additional protection to committees pursuing open, candid peer review in that state.

The case is *Cocco v. Maryland Commission on Medical Discipline,* No. 481 (Md. App., April 12, 1978). At issue was whether the state's medical disciplinary board could subpoena the records of a hospital review committee with respect to its investigation of an "unnamed physician." The defendants, Doctor Cocco and others, were members of the hospital medical staff review committee.

The statute is Maryland Annotated Code, Art. 43, §130A, which states, in part:

> In no event shall any minutes or notes be taken in the course of determining the denial, limitation, reduction or termination of staff privileges be subject to review or discovery by any person.

This statute was enacted after the Commission had subpoenaed Doctor Cocco and the records in question. At the time of the subpoena, another statute, Art. 43, §134A was in effect. It states:

> The proceedings, records and files of a medical review committee are neither discoverable nor admissible into evidence in any civil action arising out of matters which are being reviewed and evaluated by the committee.

Both statutes remain in effect. Over thirty states have statutory provisions similar to §134A, preventing the subpoena of peer review committee records in civil actions, i.e. lawsuits.[1] In some jurisdictions which have no such statute, judicial determinations have recognized the value of safeguarding the confidentiality of such records.[2] The significance of the *Cocco* case is that the state disciplinary commission, not a court, subpoenaed these records.

The Commission took Doctor Cocco and the other committee members to court to obtain the notes and minutes of the committee relevant to the unnamed physician.[3] The Commission successfully argued that the words "civil action" in §134A referred to court proceedings, not to administrative proceedings, such as those of the Commission. The Court of Special Appeals agreed with the trial court that §134A was not applicable in this situation. The appeals court, however, invoked §130A to protect the review committee's minutes and notes from Commission subpoena.

The entire legislative bill of which §130A is a part provides a means whereby the Commission on Medical Discipline can learn of actions taken by hospital medical staff committees which adversely affect a physician's staff privileges. Since these committees have the best available knowledge of a physician's day-to-day practice, such information is valuable in advising the Commission of physicians whose competence or conduct has been questioned by their peers. When an investigation by a peer review committee takes place in the hospital, however, and no action is taken to curtail privileges, the bill incorporates provisions to protect the rights of the accused physician.

The appeals court considered the legislative history of this statute. The court concluded that the legislature intended such minutes and notes as the Commission sought to obtain from Doctor Cocco and the others to be excluded from the type of materials the Commission had a right to subpoena. Furthermore, although §130A was enacted after the subpoena was issued, the court determined that the important protections it provided should be applied in this case.

Three principles can be drawn from this case important to members of peer review committees and directors of continuing medical education in hospitals. First, periodic review of cases is not strictly an educational exercise. Such review can and frequently does point out deficiencies in physicians' competence, capabilities and/or character. Members of review committees should not be afraid to convey factual findings to the state disciplinary board. On the other hand, the physician who is being reviewed has rights too. Not all matters discussed by a peer review committee have any reason to go beyond that committee. Indeed, such committees should be scrupulous to conduct their activities in confidence. Finally, the *Cocco* court is only the latest to recognize that constructive professional criticism will suffer if those reviewing a colleague's conduct fear that their comments at such meetings will always be available to disciplinary boards and/or malpractice lawyers. The courts desire to encourage candor in such professional review. Such candor has a real value in improving the practices of all involved in the review process, and this ultimately results in better patient care. In providing that the minutes and notes of Doctor Cocco's committee be exempt from Commission subpoena, the Maryland court voiced its encouragement of absolute candor at such committee meetings.

REFERENCES

1. See: Isele, W.P., "Legal aspects of peer review (part I)," *Hospital Medical Staff Advocate,* Vol. 1, no. 3 (September 1977)
2. See: *Bredice v. Doctor's Hospital, Inc.,* 50 F.R.D. 249 (DDC, 1970), also: Isele, W.P. "Legal aspects of peer review (part II)," *Hospital Medical Staff Advocate,* Vol. 1, no. 4 (November 1977)
3. *In the Matter of . . . an Unnamed Physician,* No. 110/275/6048 (Md. Cir. Ct., Balt. Co., May 4, 1977)

WILLIAM P. ISELE, J.D., Staff Attorney, Dept. of Health Law Office of the General Counsel, A.M.A.

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Special from Washington

One of the thornier problems confronting health care planners, policymakers and providers—the geographic distribution of health manpower, particularly physicians—was the subject of a recently completed study by the General Accounting office.

In a report to Congress the GAO said that $430 million in Federal funds had been spent during fiscal years 1972-77 in an effort to increase the supply of physicians in shortage areas.

According to the GAO, some 384,900 non-Federal physicians—369,800 MDs and 15,100 doctors of osteopathy—are unevenly distributed throughout the United States. Of the MDs, approximately 292,200 (79 percent) are providing patient care. But although this works out to 137 physicians for each 100,000 persons, a disproportionately large number are located in urban areas, where the physician-to-population ratio is significantly higher than in rural areas. Furthermore, the GAO reported, distribution is also "inequitable" within urban centers.

As for the 20,000 new physicians on whom data were available, they followed the path of their predecessors: 90 percent of the 1967-71 U.S. and foreign medical graduates licensed located in cities.

The study attributed the urban concentration of recent graduates primarily to the fact that most physicians, other than general and family practitioners, choose urban practice locations. The latter are more uniformly distributed between urban and rural areas, the GAO said.

"Preference for rural or urban living and the availability of clinical support facilities and personnel were equally important factors affecting the location decisions of a sample (1,066) of physicians licensed in 1971," the GAO found. "As a group, however, professional considerations, including clinical support, contact with other physicians, and continuing education opportunities, played the largest role. Overall, the physicians stated they had not been greatly influenced by economic factors, such as income potential and the availability of loans."

Prepared by the Washington, D.C.
Office of the American Medical Association

Reporting on the National Health Service Corps, the GAO told Congress:

"The Corps has undoubtedly increased the availability of physicians' services in communities designated by HEW as having a critical shortage of health manpower. However:

—"The Corps has not adequately considered the demand for medical services when assessing the need for physicians in shortage areas. This, coupled with its decision to place a minimum of two physicians at most sites to the extent possible, has resulted in many physicians being underused in terms of patients served at sites in operation one year or longer.

—"The Corps has experienced difficulty in recruiting physicians willing to voluntarily practice in the more remote, less populated areas. Consequently, many of these sites have remained unstaffed for periods ranging up to 4 years.

—"Corps officials look to the HEW scholarship program with its shortage area service obligation to provide a sufficient supply of physicians in the future. But, because of deferments for graduate medical education, HEW officials do not expect a substantial number of physicians to be available until fiscal year 1979.

"It should be recognized, moreover, that the number of physicians authorized by the Corps for its unstaffed sites may exceed the number needed as evidenced by the low use of Corps physicians at many sites in operation one year or longer. This raises serious questions to GAO concerning the extent of unmet demand for health care in some of these areas and, therefore, the number of additional physicians with scholarship service obligations that will be needed to serve in HEW-designated shortage areas.

—"From inception through July 1976, only 42 physicians—out of a total of about 800 who served in the Corps—remained in the shortage areas or were planning to do so, as private practitioners, which is a major program objective."

As for loan repayment programs, the GAO found them relatively ineffective. "As of October 31, 1977," the report said, "The Federal loan repayment program attracted only 762 physicians (about 1.7 percent of those eligible) to shortage areas in return for loan repayment. Moreover, the majority of those who participated through February 1976 probably would have established practices in those shortage areas anyway. Thus, it seems the program provided financial benefits predominately to physicians who already had decided on shortage area practice."

The GAO found it hard to assess the effectiveness of area health education-centers.

"The long-term nature of the program, the lack of clearly defined national strategy, and different developmental stages and program strategies among the 11 area health education centers make identifying and assessing the program's impact difficult. Nevertheless, GAO believes this program conceptually has considerable long-term potential to indirectly improve health manpower distribution by overcoming some of the important professional objections to shortage area practice."

Both the preceptorship and family medicine training programs were too new at the time of GAO's review to determine their impact on increasing the supply of physicians in shortage areas.

In an effort to assess state and private efforts to improve access to primary care medical services in rural areas through programs relying heavily on nonphysician providers (including nurses and physician extenders) the GAO visited four such programs:

The North Carolina Rural Health Centers; Kentucky Frontier Nursing Service; Checkerboard Area Health System; and East Kentucky Health Services Center. All use physician extenders as principal providers of health care in rural clinics. The physician extenders provide services under the supervision of physicians, but physicians are not always present when the services are performed.

The inability to receive reimbursement from Medicare (part B) and some other third-party payers for physician extender services at independent sites such as those discussed above had apparently restricted their potential widespread use.

"In 1965," the GAO reported, "when Medicare was enacted, there were few if any physician extenders working and no allowance was made for their reimbursement." But, the report continued, "On December 18, 1977, the President signed into law the "Rural Health Clinic Services Act," authorizing reimbursement under Medicare (part B) and Medicaid for services rendered in certain rural health clinics in underserved areas. Among the services covered are those of physician assistants and nurse practitioners, whether or not a physician is physically present at the time the service is provided.

"The act also requires the Secretary of HEW to conduct demonstration projects in urban medically underserved areas with respect to reimbursement on a cost basis for services provided by physician-directed clinics which employ physician assistants and nurse practitioners.

"In GAO's view, now that reimbursement for physician extender services rendered in rural clinics in underserved areas has been authorized, projects which rely extensively on physician extenders at satellite clinics or in mobile units with backup from physicians in larger neighboring communities could constitute an approach for providing health care to communities in the Nation otherwise unable to attract or retain physicians."

The General Accounting Office recommended that the Secretary of Health, Education, and Welfare should:

—"Develop guidelines for assessing under what circumstances it would be appropriate to assign health care providers to entities requesting Corps assistance and the number and type of provider(s) that would be most appropriate.

—"Require communities and other entities requesting Corps health care providers to conduct studies which identify, to the extent possible, the number and types of residents located therein who are likely to seek care from a Corps-sponsored practice.

—"Develop multiyear projections to assess the total number of physicians with scholarship commitments that will be needed to serve in shortage areas.

—"Make an analysis of the extent to which family practitioners and other specialists are locating in HEW-designated shortage areas and, based upon this analysis, submit to the Congress recommendations for financially supporting those programs which constitute the greatest resource for providing health care to medically underserved areas.

—"Work with the States to identify those areas having health manpower distribution problems and develop a strategy for marshaling resources—Federal, State, and private—to establish an integrated program designed to provide health services in the manner most appropriate to each area.

—"Examine those programs which rely on physician extenders to help deliver health services to those areas otherwise unable to attract physicians and consider seeking legislation which would provide Federal funds to help develop those programs found to be most useful."

The President's Page

The AMA is Your Organization

It is a source of embarrassment and chagrin to me to have learned personally that the Board of Trustees of the AMA is all too well aware of the CSMS' membership difficulties not just with the AMA itself, but with AMPAC as well. I remain puzzled by the seemingly schizoid behavior of many of our members—schizoid because on the one hand they practice in a state with one of the most heavily regulated health industries and on the other, remain enslaved by timeworn "liberal" ideation and rhetoric of several decades past. With its usual sloppy reasoning, it at once accused the AMA of being a monopoly, controlling medical economics, and at the same time of being a closed shop union, controlling the "labor force." To frost their rhetorical cake, the liberals added such epithets as "reactionary," "undemocratic," "unrepresentative," and "non responsive to social needs and progress."

The two primary functions of Trade Unions are to obtain, by monopolistic control of labor, the best possible wage and fringe package for its members and to control as totally as possible, access to jobs. I believe that under these standards, the AMA has failed miserably to qualify. Certainly it has no monopoly of the labor market as so many of you successful physicians can attest. And in view of the erosion of your economic package in the past 15 years, I doubt many of you would attest to the AMA's success in your economic interests. So it is not a union.

But what it is, is a well-financed and powerful voice of a still independent profession. Never forget the monies spent on health care in this country yearly nor the employment provided. There is potential for great political power for the politician who can control this industry. But in order to revolutionize it into an industry of politically determined control and decisions it was and is manifestly necessary to discredit and destroy the largest national physician's organization. And if naive and gullible physicians whose knowledge of medicine and surgery is, hopefully, much greater than of history and politics, could be found to help destroy themselves, so much the better.

If the AMA were indeed undemocratic and unrepresentative it might be far more efficient and effective. It is, however, run from the bottom up not the top down. Elected Delegates serve at the pleasure of their state societies and elected councillors and trustees serve at the pleasure of the Delegates. Cumbersomely slow, exasperatingly democratic, it is an authentic representation of our profession, believe me, for I have watched it first hand for several years. If the AMA were reactionary, why would it bother to support the concept of National Health Insurance or spend millions of dollars of its members' dues on assurance of the quality of medical education, undergraduate, graduate and post-graduate or on hospital quality assurance activities or support house staff in its right to negotiate with its employers? There are some academics who are a bit disgruntled to find themselves on the "conservative" side and the AMA on the "liberal" in this last matter.

None of the allegations made against it are in my opinion now true, if they ever were. This leaves all of you CSMS members who opt out of the AMA two choices. You may continue your uninformed selfish and illogical behavior. You can continue to enjoy the advocacy given you, the quality of practice assured you and the reflected prestige and power that enlarge you for which the rest of us pay. And you might just think of all that your professional ancestors left you and fleetingly, for that is probably the longest you concentrate on such things, think of what you will leave to your professional descendants. And I hope you are ashamed just a little for you should be. You have dishonored some traditions of this ancient profession, a continuum of healers devoted to knowledge, truth, their patients' welfare and each other.

If the AMA has faults, they are more the doing of nonparticipants who take what profession and society had to offer and return little. Yes, I wrote "little." Your practice is not enough. What are you returning of advice and interest to a country concerned by the escalating cost of your care, misled by politicians to believe government is the answer and the physician the villain? You say little, do nothing and the responsibility for medicine's problems is right where it should be, at your feet.

Jerome K. Freedman, M.D.,
President

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Reflections from the Dean's Office

Dr. Harvey's Bold Idea

ROBERT U. MASSEY, M.D.

1978 marks the four hundredth anniversary of the birth of Dr. William Harvey, who, if not the first experimenter in medicine, certainly was its brightest star in those early years of the seventeenth century. This is the year to read Sir Geoffrey Keynes' biography, as well as his 1928 English translation of *De Motu Cordis.* It may surprise you to find that this latter work comprises only 72 pages in Latin, or 118 in English.

Books, especially biographies, have the power to move us to new resolutions and great exertions, or failing that, at least to provide an ampler vision. Recently a group of scientists, including Rosalyn Yalow and John Eccles,[1] were asked which books had influenced them most in their careers in science or in medicine. Rosalyn Yalow, who was awarded the Nobel Prize last year, saw in Eve Curie's biography of her mother, *Madame Curie*, "the inspiration and stuff of which dreams are made."

Sir John Eccles came to a "turning point in my scientific life" when he heard Karl Popper lecture on ideas which he had proposed in 1935 in *Logik der Forschung*. Popper, rejecting inductive reasoning as the philosophic base for the scientific method, declared that "bold ideas, unjustified anticipations, and speculative thought are our only means for interpreting nature."[2] Because he could now accept his own "brain child", the electrical hypothesis of synaptic transmission, as an idea which could be wrong, Eccles was able to take up Sir Henry Dale's hypothesis of chemical transmission and to make it his own.

My heroes in the years when it was important to have heroes were Marie Curie and Louis Pasteur. There remains a bright romantic glow surrounding those two names which now seem to be from an age which has almost been forgotten. They did not seem so distant then. When I read *Madame Curie* in 1938,[3] I still had memories of the newspaper accounts of her death only four years earlier. I had already read René Vallery Radot's *Life of Pasteur*[4] and knew that the lives of these two great scientists had overlapped. They had breathed the same intellectual air of late nineteenth century Paris, those glorious years of European science. The scientific and romantic minds of that time were clearly good for one another.

Whitehead wrote of romance as the first stage of learning, of a "ferment already stirring in the mind."[5] I think that that first stage must be reset time after time if learning is to be a lifetime of renewals.

Francis Bacon by inventing his "great engine", inductive reasoning, cleared the way for the scientific renaissance and the modern world. His method clearly released scientific thought from authority and the weight of ancient systems. He understood that it is important to observe, to record, and to reason from particulars, but he did not understand the importance of the experiment nor the critical place of the bold idea. He was not a scientist, and William Harvey, his physician, said he reasoned like a lord chancellor.

Claude Bernard seems at odds with Bacon when he says that there is "only one form of reasoning: deduction by syllogism". In Bernard's view, "the idea is the essence of all reasoning and all invention," and later that "endless accumulation of observations leads nowhere."[6]

For Harvey it was a bold idea which had obsessed him for years before the publication of *De Mortu Cordis* in 1628. The idea followed by the experiment is expressed by his own words referring to the motion of the blood:

"I began to bethink my self if it might not have a circular motion, which afterwards I found true."[7]

Acquiring facts and making observations leads nowhere unless somehow an idea springs out, something intrinsic to the mind, brought into being by the facts and the observations but not made out of them. For the scientist, bold ideas can be refined into hypotheses which may then be tested by experiment.

For those of us who do not test our ideas in the laboratory, but who must make do with the random experiments of nature, ideas and the romance of speculation give value to life and joy to learning, which otherwise would be only an "endless accumulation of observations" and the bareness of memorized facts.

Sir Geoffrey Keynes quotes a letter written by Thomas Browne to a friend in 1646, "Be sure you make yourself master of Dr. Harvey's piece "*De Circul Sang,* which discovery I prefer to that of Columbus."[8]

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ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut School of Medicine, Farmington.

CALL
SEMI-ANNUAL MEETING OF THE HOUSE OF DELEGATES

The 1978 Semi-Annual Meeting of the House of Delegates will be held at the Ramada Inn, North Haven, commencing at 9:00 A.M. on Thursday, November 16.

Jerome K. Freedman, President
Stuart Ragland, Jr., Speaker of the House
Louis C. Backhus, Secretary

INTRODUCTION OF RESOLUTIONS

Article V, Section 12, Par. 3 of the Bylaws of the Society Provides:

Resolutions may be introduced by any Active or Life Member of The Society, in compliance with the following provisions.

a. *All resolutions, reports and similar items of business submitted in writing and received at the office of the Executive Director not later than thirty days before the date scheduled for that meeting shall be considered as regular business of the House of Delegates.*

b. *Component county associations whose meetings are held later than thirty-five days prior to the date of the House of Delegates shall be allowed five days after the close of such meeting in which to submit resolutions, reports and similar items of business to the Executive Director's office and still have such material considered as regular business. In no event, however, may such resolutions, etc. be considered regular business if they are received later than fifteen days prior to the date of the meeting.*

c. *Reports, recommendations, resolutions or other new business may be presented to the House of Delegates by the Council of The Society at any time and shall be considered as regular business.*

d. *Any business which does not qualify as regular business in accordance with the foregoing provisions may be accepted for consideration by a majority vote of the delegates present and shall be referred at once by the Speaker to a reference committee. When business is introduced under the provision of this paragraph the vote shall be taken without debate, except that the introducer shall be allowed not more than two minutes to explain why it should be considered as regular business.*

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EDITORIALS

The Mandrake Shrieks

"The human heart is full of leaks.
The human head is full of vapors.
The crowds disband; the mandrake shrieks.
The scandal is in all the papers."

—Edmund Wilson

The Editor of the *New England Journal of Medicine* has recently complained about articles that in part or whole constitute previously published work, at times without appropriate reference. Recent years have found me more bemused than angered by publishing irregularities. Flagrant examples I have encountered include dual publication of the same case by different authors, publication of two different papers on the same subject with altered case histories but identical films, and changing the diagnosis on a film by turning it 180°. These shenanigans are comparable to painting rabbits red or whatever color is appropriate. They stem from real or imagined pressures for promotion and from a variety of psychiatric faults that are common to all men but more difficult to accept—and therefore more notorious—in people supposedly devoted to science.

We speak disparagingly of the publish or perish syndrome in which we continue to participate and for which we have no alternative. The obituaries we write praise our departed colleagues for having authored more than x number of papers. Quantity has become more important than quality in the groves of both academy and cemetery. Frenetic faculties write and rewrite, busily laboring to produce, to achieve some vaguely defined goal with obligations to the medical student and patient reduced to a minimum. Perhaps activities of this sort beget a little plagiarism from self and others.

Editors and their staff are, understandably, partly to blame for the ease with which repetitious material is regularly published. The time required to determine originality of thought or contribution to a concept is enormous. Further, specialty orientation seems to justify editorial selection on the basis of the needs of an informed readership. This reason appears based on the assumption that most physicians seldom read other than their specialty journals. Some agency ought to determine the accuracy of this unhappy concept of our scholarship.

I have grave doubts that cheating can be prevented; I am not sure how cheating should be punished. Culprits, apprised of their duplicity, have reacted in predictable ways—by denial, by tortured explanations and vituperation. Is there a solution? An appeal to honor is fruitless; we are all as honorable as Brutus. Elimination of advertising would sharply reduce the number of journals—a happy thought. The volume of articles submitted to a surviving journal would increase and have a twofold effect—an increased editorial work load and equally an increased opportunity for selectivity. Necessarily, the cost per journal would go up but the total cost of journals would decline with the decline in number available for purchase.

We can now propound a principle that would make Peter proud—the volume of papers submitted and published is proportional to the number of publications or, otherwise stated, the quality of a published paper is inversely proportional to available space.

Think now of an even more subtle effect. Once again faculty promotion committees would have to look favorably on other accomplishments such as patient care and student teaching. The onus of rank modified by the word 'clinical' would disappear and, mirabile dictu, we clinical types would be able to preach that physicians exist for the good of the patient without being stoned from the pulpit.

Solomon S. Schwartz, M.D.

Department of Radiology
The Hospital of St. Raphael

The Age of Antibiotics: Humility Revisited and a Remembrance of Robert Koch

The ecology of man and his microorganisms has changed over the last several decades. Infectious diseases were equated with communicable organisms exogenous to the host—puerperal sepsis, salmonellosis and tuberculosis. As these diseases have been controlled by public health, public hygiene, and antibiotics, there has been an increase of infections from bacteria normally colonizing the host's own mucocutaneous surfaces. Such endogenous infections would include aspiration pneumonia, dental infection and intra-abdominal sepsis. We all accept this as routine.

Experience has shown that antibiotic therapy is most effective when it is based upon established principles, rather than sudden perusal of printed directions surrounding a vial of an antibiotic. If these principles are disregarded, failure will often result with the threat of secondary infection and increasing complications. In view of escalating health care costs and the spreading threat of malpractice suits, the margin of error in utilizing antimicrobials is smaller now than ever before. We all understand this.

In the last decade there has been a proliferation of new agents, especially among the aminoglycosides, the cephalosporins, and the penicillins. Who doesn't have difficulty in evaluating the proper place and therapy for these newer agents? Obviously, it takes several years of clinical assessment and experience—even after FDA approval—before the proper value and adverse effects of an antimicrobial agent can be not only scientifically understood but academically appreciated. Despite years of regular clinical usage of an antibiotic, sometimes it remains difficult to categorically claim that one agent is superior to another for a specific infection. We all appreciate this.

Our patients—the American public—may not accept these principles since they demand cure without failure, service without fees, surgery without scars, treatment without complication, and in fact expect and demand perfection in physical as well as mental health. It has been recently pointed out that the American public expects three things from physicians—immortality, eternal sexual potency and all at no cost. As physicians and scientists, we can not escape the fact that we have participated in the deception and that the public really will not accept the responsibility for their own health. Antibiotics—like tranquilizers—are routinely prescribed over the telephone. We all do not accept these statements.

Perhaps, the physician who blames his patient for developing necrosis and infection under a tight plaster cast of four weeks' duration is correct. Why have humility when the patient demands perfection? If we do not concur in this reasoning, then at least the doctor and the patient should have some sense of historical perspective. Instead of considering space as walking on the moon, we should think about the Wright brothers and their flight in 1903. Instead of dissipating the age of antibiotics, we should remember that it was only 100 years ago that Robert Koch wrote his treatise on the etiology of traumatic infectious disease.

Robert Koch (1843-1910) established the bacterial cause of many infectious diseases and discovered the microorganism causing anthrax (1876), wound infections (1878), tuberculosis (1882), infectious conjunctivitis (1883), and Asiatic cholera (1884). Interestingly, he received the Nobel Prize in Physiology and Medicine in 1905, not for proving the etiology of infections, but rather for his work in developing tuberculin as a test for tuberculosis. Semmelweis (1847) recognized the infectious nature of puerperal fever and Pasteur (1862) reported his experiments with bacteria and exploded the theory of spontaneous generation. In 1865, Lister proved the effectiveness of Semmelweis' clinical impressions and Pasteur's laboratory investigations.

But it was only 100 years ago that Koch conclusively *proved* that bacteria caused infection and on this 100th anniversary of his treatise on the bacteriologic cause of surgical infection, we all should pause a moment, not so much in tribute to a single brilliant scientist but rather to reflect on the astounding short time span involved in the progress of public health and medicine; to consider how we abuse antibiotics not only in selection, dosage and route of administration but also as a balm for mismanagement or misdiagnosis; and why the American public considers antibiotics to be the panacea for even the common cold; and why our patients come to expect life without infection. In conclusion, the prescription of antibiotics to cure or control infection should be based upon the physician's feeling of modesty in successful treatment, humility in failure, and the appreciation of the following quotation from Cicero:

> "History is the witness that testifies to
> the passing of time; it illumines reality,
> vitalizes memory, provides guidance in
> daily life, and brings us tidings of antiquity."

Marvin S. Arons, M.D.

Letters to the Editor

Letters to the Editor are welcomed and will be published, if found suitable, as space permits. Like other material submitted for publication, they must be typewritten *double spaced* (including references), must not exceed 1½ pages in length and will be subject to editing and possible abridgment.

MORE ABOUT DEATH

To the Editor: It is saddening that Professor Brodsky *(Connecticut Medicine,* July 1978) has evidently not recognized that his proposition that certain human beings he classifies as "non-persons" (he cites certain terminally ill people, some mental defectives, the insane as examples) should be perhaps killed, bears a most disquieting resemblance to the "Untermensch" (sub-human) theories of the late Alfred Rosenberg. It will be recalled that the Nazis began with the "Euthanasia" of the mentally or physically defective, and none of us should need to be reminded as to what that led in a few short years. Euthanasia is the first step on the road to Auschwitz. To those who would protest that "It can not happen here," I would reply that that is just what the average German would have said in 1932.

There is, moreover, the question of who would do the killing. As a physician, I decline to have my services volunteered as executioner, and I hope most physicians would feel the same way. Who, then, would do the grisly deed? Will Professor Brodsky offer to serve his turn at the abattoir? I have sometimes thought that if the advocates of Euthanasia were required, as a provision in the law, to themselves be the actual killers, a sudden and profound silence might descend upon the entire debate.

E. Lloyd Dawe, M.D.

Danbury, CT

The above letter was referred to the author of the article in question who offers the following reply:

To the Editor: It is unfortunate that Dr. Dawe responded to my careful discussion of the problem of dying by dismissing my extremely qualified endorsement of the moral permissibility of Euthanasia for some people on the grounds of its slight and superficial resemblance to some practices of the Nazis. It is also unfortunate that he mis-represents my position. For I advanced a proposal dealing only with some terminally ill people and then suggested that we *ask* whether the analysis applies to some old senile people suffering from degenerative conditions and some very defective infants. I made no mention whatsoever of the insane. Would Dr. Dawe forbid us from undertaking serious, scientific and moral inquiries concerning these problems? Does he think there is no population of people who in the course of dying live weeks and months and indeed years of unqualifiedly wretched life? Does he think that during such periods the dying person somehow retains his or her humanity? My knowledge of the literature which was unfortunately confirmed by observing the deaths of my mother and my father indicate that this is simply false. During the first two weeks of the last month of my father's life he expressed such humanity as he could hang onto by asking to die rather than live on without being able to function physically, emotionally or intellectually as a human person. And during the last two weeks of his life such conscious moments as he had were filled exclusively with pain. Do I join the Nazis when I attempt to explain why he was compelled to undergo these experiences and do I espouse their doctrines if I advance a theory arguing that it is our very anti-Nazi respect for human persons which provides us with the grounds to proceed cautiously to change the norms of dying because the world the old norms governed no longer obtains? Is there really no difference between holding that human beings may have their lives terminated if these lives are devoid of *all* they and we cherish as features of humanity (very broadly construed) and holding that people who otherwise enjoy their humanity may be killed if they are blind, or deaf, or lack a limb, or are Jews or are stupid etc.?

Of course there is no simple answer to Dr. Dawe's last question. But there is something of an ideal case,—namely, that the dying individual, having been dealt with honestly and compassionately will be provided with an opportunity to decide the length and character of the remainder of his life and that he or those responsible for his care will be allowed to execute his decision.

Garry Brodsky, Ph.D.

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BOOK REVIEW

I Am Whole Again—The Case for Breast Reconstruction After Mastectomy. Jean Zalon with Jean Libman Block. Random House, New York, 1978, 151 pp., $7.95.

Ms. Zalon, who had a mastectomy in 1970 and reconstruction in 1974, is a woman on a crusade, telling others that after the nightmare of mastectomy there is the hope of reconstruction. She has written an intelligent, warm, and vastly informative book.

She tells of her own experiences and includes interviews with other mastectomy patients. She has before-and-after pictures of reconstruction. She discusses evenly and without hysteria the feeling of being different, the feeling of not being yourself.

She makes it very clear that there are steps which can be taken by the surgeon, i.e., nipple banking or incision technique which will ensure a better reconstruction. She also mentions that reconstructions have been done many years after mastectomy. She discusses the shape of the prosthesis, what can be done if the old and new breast do not match, but above all the gaining of a positive female self-image.

She writes of the feeling that so many mastectomy patients have that they *must be brave* and then relates the pattern of grief which must be lived through after any loss. She feels very strongly that everyone involved with these women must be informed of the real feelings that occur and must make a commitment to help in a positive way. She says that, in the past, too many medical people have not understood the horror of mastectomy that women have. Too often, tears of grief were met with a "Why are you so upset; we cured your cancer" attitude.

Ms. Zalon poses questions and answers them. How soon after mastectomy to reconstruction? How much will it cost? She lays to rest many of the more common worries. She says that reconstruction is not for everyone, some because of radical surgery; but for those who want it, she has written a book with a lot of sensible guidelines. She wants every woman to know that mastectomy is not necessarily the final step.

This book is a consumer's guide but it is not a feminist diatribe. She thinks highly of most of the doctors she met. There are no tales of male chauvinist physicians or botched operations. The whole tone is reassuring. This is a well thought out book by a woman who has been through this particular horror and sees that her final solution may just be the answer for a lot of other women. It would calm many fears and may save some lives. This is a very important book and is highly recommended.

Susannah English Curi

Goshen, CT

PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiry of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511 (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine* as space permits.

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

Office space available in beautiful Northwestern, Ct. Erdman Medical Building. Full or part time physicians needed in specialties not covered, Otolaryngology, Dermatology, Allergy and Gastroenterology. Contact Administrator, Sharon Medical Arts Center, Sharon, Ct. 06069. 203-364-5161.

EMERGENCY ROOM PHYSICIAN

Physician for Emergency Room of a modern hospital located in Putnam, Ct. 45 minutes from Providence, Hartford and Worcester. Full time, competitive salary, liberal benefits. Conn. license required. Call collect 203-928-6541. Charles F. Schneider, Exec. Dir., Day Kimball Hosp., 320 Pomfret St., Putnam, Ct. 06260.

Full time E.R. physician in 90 bed excellent community hospital. Contact C. Weeks, M.D., Emergency Dept., Sharon Hosp., Sharon, Ct. 06069.

Chief of Emergency and Ambulatory Care Services: Board eligibility or certification required, with two years of post-residency training in hands-on emergency care; experience in critical care medicine, including Trauma. Salary plus benefits. Location a long-time resort area, affords superb family living and recreation. Send resume in confidence to John F. Mirabito, Pres., Lawrence and Memorial Hosp., 365 Montauk Ave., New London, Ct. 06320. An equal Opportunity Employer M/F.

FAMILY PRACTICE

Large Family Practice available, growing rapidly; no OB, small town Southeastern, Ct. Community hospital with privileges close by. House and office together directly on the water. Ideal set-up for professional woman and children. Contact CSMS-GDE.

We are near completion of a medical facility in town which will accommodate two physicians. Contact Shirley Martel, Plainfield Health Advisory Group, 8 Community Ave., Plainfield, Ct. 06374.

Family Practice. Professional Building. Excellent Opportunity. Louis Weiss, Lafayette Professional Bldg., 881 Lafayette Blvd., Bridgeport, Ct.

Excellent location for general practice. Servicing 20 to 25 thousand people. Rural setting between Fairfield County and New Haven and New York. 10 miles from Norwalk and Danbury Hospitals. Contact Bernard S. Unger, D.D.S., Georgetown, Ct.

Two to three Family Practitioners wanted. Contact Joyce U. Conroy, Conn. Department of Mental Health, 90 Washington St., Hartford, Ct. 203-566-4221 or 203-566-5493.

Family Practice. Presently two man partnership looking for 3rd, in West Hartford, Ct. Office open 5 days a week and weekend call arranged. No OB. Contact Yale Gordon, M.D., 10 Princeton St., West Hartford, Ct. 06110.

FAMILY PRACTICE—CONTINUED

One of the fastest growing suburban communities in Ct. Convenient to UConn and Yale Medical Centers. Financial assistance considered. Excellent community hospital with multiple specialty back-up. Send. C.V. to CSMS to be forwarded. (JFM)

Manchester, Ct. with 50,000 pop. needs primary medical care physician. Beautiful place to live and congenial medical community ready to help newcomers. Excellent coverage system functioning in addition to full time emergency department physicians in the 300 bed community hospital. Contact H.L. Snyder, M.D., Manchester Memorial Hosp., Manchester, Ct.

Associate wanted for partnership practice. Arrangements negotiable. Attractive community in Fairfield County. Send C.V. to CSMS to be forwarded. (RIS)

Family Medicine position available with three-man Family Medicine group and a consulting psychologist. Contact Theodore Safford, M.D., Ridgefield Medical Group, 38 Grove St., Ridgefield, Ct. 06877.

Associate Director of Family Practice Residency Program in an established university affiliated Family Practice Program in a New England university town. Associated with a 378 bed JCAH accredited community general hospital. Administrative and teaching responsibilities for three years, 18 resident programs and related clinical supervision. Some actual practice experience preferred, previous academic experience in medical school or residency program desired. Salary commensurate with ability and experience. Liberal fringe benefit program. Wide variety of winter and summer recreational facilities available. Cultural facilities excellent. Central Connecticut location. Please send C.V. to CSMS to be forwarded. (FRC)

New ownership of building. Historic landmark hotel. Built in 1856 in process of restoration. 1st floor available for medical office. None presently in town. Contact J.R. Chintz, c/o Valley House, Collinsville, Ct. 06019.

Doctor wanted to take over well established Family Practice in Northwestern Ct. area. Retiring MD will stay on for introducing and consulting. Immediate income. Office fully equipped. Send C.V. to CSMS to be forwarded. (CNW)

Family Practitioner to join established growing practice in Connecticut. Must be able to work under pressure in busy office. Send C.V. to CSMS to be forwarded. (LAF)

Board eligible or certified Family Practice MD to affiliate with board recertified MD. Early partnership. 3-6 months with mutual agreement. Send C.V. to CSMS to be forwarded. (JG)

Family Practice or Internal Medicine: Physician wishes to retire. Also a month ago another physician retired from medical practice here in Torrington leaving a void which could be easily filled by a Family Physician or Internist, who would be looking for a quick start as a solo practitioner in this area. Michael E. Giobbe, M.D., 335 Prospect St., Torrington, Ct. 06790. 203-489-5921.

OBSTETRICS AND GYNECOLOGY

Solo OB/GYN seeking congenial partner. Contact Bart DePetrillo, M.D., 134 Grandview Ave., Waterbury, Ct. 06708. 203-754-2535.

OB/GYN—3 openings. Contact New Milford Hosp., New Milford, Ct. 06776.

One of the fastest growing suburban communities in Conn. Convenient to UConn and Yale Medical Centers. Financial assistance considered. Excellent community hospital, no obstetrical service. Interested in attracting a physician primarily if not totally interested in gynecology practice. Medical Staff of General Practitioners and multiple specialties. Send C.V. to CSMS to be forwarded. (JFM)

OBSTETRICS AND GYNECOLOGY—CONTINUED

Yale Health Center needs a female OB/GYN. Pre-paid medicine with Yale Medical School. Part-time or full-time. Must have boards or board qualified. There is no definite opening in budget at present but will be most willing to talk to anyone who is interested. Contact William C. Billings, M.D., 17 Hillhouse Ave., New Haven, Ct. 06520. 203-436-8752.

Board certified or eligible to work with established practitioner in a 13 man multi-specialty corporation. County practice in relaxed atmosphere with all facilities in NW Conn. 2 year salary followed by full membership status. Send C.V. to CSMS to be forwarded. (WN)

Board certified or eligible to associate with young board certified, in rapidly growing practice. Excellent community hospital. New Haven area. Yale appointment by choice. Full partnership after 24 months. Send C.V. to CSMS to be forwarded. (RM)

Board certified or eligible to practice with young certified OB/GYN in Northwest Ct. Salary followed by partnership. Send C.V. to CSMS to be forwarded. (MRT)

RADIOLOGY

Board certified diagnostic Radiologist to work 4-6 months yearly to augment a group in the greater Hartford area. Compensation arrangements very reasonable. Send CV to CSMS to be forwarded.

PHYSICIANS WISHING TO LOCATE IN CONNECTICUT

ANESTHESIOLOGY

Nov. '78. Age 36. AB-elig. MD, int. and res. in India. Also res. at the Med. College of Wisconsin. 12 yrs. experience in India, Europe and England. Solo, grp. or assoc. practice in med. community in Ct. Contact. CSMS-Anes./RNS.

FAMILY PRACTICE

Jan. '79. Age 31. Nat'l. bds., elig. MD from State Univ. of NY at Buffalo. Int. at Evanston Hosp.-Northwestern. Res. at Kaiser Foundation Hosp. Grp. practice preferred in med. community. Scott D. Kirsch, M.D., 19250-7 Hamlin St., Reseda, CA 91335.

INTERNAL MEDICINE

Bd. elig. Conn. license. 16 years experience. Wishes to relocate in Conn. Contact CSMS-IM/AJB.

Early '79. Age 31. Nat'l. bds., cert. Presently in practice. MD from UConn. Int. at Long Beach Med. Hosp., CA. Res. at Mayo Clinic, MINN. Presently at Indian Hosp., AZ. Wishes practice with a small, grp. with low volume high quality practice in med. size community in Ct. Dennis Gottfried, M.D., 4602 Calle Redonda, Phoenix, AZ 85018.

Cardiology: Available now. Age 39. Conn. license. FLEX. AB-elig. Presently in practice. MD and int. in India. Res. and fellowship at St. Vincent's Med. Ctr., Bridgeport, Ct. Also fellowship at Jewish Hosp., O. Will consider all types of practice except solo, in any size community. G. Patel, M.D., 1503 Governor Terr., Cincinnati, O 45215.

Cardiology: Oct. '78. Age 31. Nat'l. bds. cert. MD in W. Germany. Int. at Mt. Sinai Hosp., NY. Res. at Mt. Sinai Hosp., O. Fellowship at Northwestern. Grp. or institutional practice in Ct. Michael M. Neumann, M.D., 5415 N. Sheridan Rd., Chicago, IL 60640.

Gastroenterology: Fall '78. Age 32. Conn. license. AB/elig.-9/78. MD from Yale. Int. and res. at Roosevelt Hosp., NY. Fellowship in East Orange Vet. Hosp. Masters in Clinical Psychology-Univ. of KY. Will consider positions of within 1½ hrs. driving from NYC. Richard Neufeld, M.D., 515 W. 59th St., New York, NY 10019.

Gastroenterology: Jan. '79. Age 31. Nat'l. bds., cert. MD from VA. Int. and res. at Mt. Sinai Hosp., NY. Fellowship at VA. Private practice desired, but will consider academic medicine. Richard M. Nisman, M.D., 550 Rossmore Rd., Richmond, VA 23225.

OBSTETRICS AND GYNECOLOGY

Available now. Nat'l. bds., elig. Presently in practice. MD from Dow Med. College, Pakistan. Int. at Greater Baltimore Med. Ctr., Res. (Surg) Downstate and Kings County, (OB/GYN) at Bronx Lebanon Hosp. and Albert Einstein Med. Ctr. Will consider all types of practice in any size community. Akbar Omar, M.D., 1523 Central Park Ave., #11C, Yonkers, NY 10710.

OPHTHALMOLOGY

Jan. '79. Age 32. Nat'l. bds., cert. MD from Columbia. Int. at Presbyterian Hosp., NY. Res. and Fellowship at Mass. Eye and Ear Infirmary. Solo, grp. or assoc. practice desired. John C. Madigan, Jr., M.D., 28 Butler Rd., Hingham, Mass. 02043.

ORTHOPEDICS

Available now. Age 45. FLEX. AB/elig. Presently in practice. Int., res. and fellowhip completed in Scotland and Britain. Wishes grp., assoc. or institutional practice in large or med. community in Ct. Alastair J.W. Fordyce, M.D., 4610 14th St., Lubbock, TX 79416.

Jan. '79. Age 32. Nat'l. bds. Presently in practice. MD from NY Univ. Int. at Beth Israel, in Mass. Res. at Harward. Grp. or assoc. practice but does not wish to be the only orthopedist in a multi-specialty grp. Will consider any size community. Peter D. Kent, M.D., 4521 S.E. 48th St., Oklahoma City, OK 73135.

PATHOLOGY

Oct. '78. Age 34. FLEX. AB/cert. MD and int. in India. Res's. at the Univ. of KY Med. Ctr. and the St. Luke's Hosp., WI. Will consider all types of practice in any size community in Ct. Kirit V. Solanki, M.D., 3635 W. College Ave., #32, Milwaukee, WI 53221.

Oct. '78. Conn. loc. Nat'l. bds., cert. Presently in practice. MD from Tufts. Int. at Lynn Hosp., res. at Springfield Hosp., both Mass. Assoc. or institutional practice in med. or small community. William J. Welch, M.D., 126 Burnham St., Newark, NY 14513.

PEDIATRICS

Available immediately. Age 32. Conn. license. FLEX. AB/elig. MD from Univ. of Guadalajara. Int. at St. John's, Newfoundland. Res's. at Beth Isreal Med. Ctr., Newark, NJ and Univ of Ct. Institutional, industrial, ambulatory care or ER practice desired. William Elman, M.D., 61 Robin Dr., Collinsville, Ct. 06022.

Available now. Age 29. Nat'l. bds., elig. MD from Downstate-SUNY. Int. at Nassau County Med. Ctr. Res. at Montefiore Hosp. Fellowship at NY Univ.-Bellevue Hosp. Grp., assoc. or institutional practice in large or med. community in Ct. Burton Banner, M.D., 525 Ocean Pkwy., Brooklyn, NY 11218.

SURGERY

Available immediately. Age 38. Nat'l. bds., elig. MD from the Univ of Buffalo. Int. at Maricopa County Gen. Hosp. AZ. Res's. at Nassau Cty. Med. Ctr. and Univ. of Limburg, Holland. Grp. or assoc. practice in small community in Ct. Arnold S. Fabricant, M.D., 252 B Belmar Rd., Cranbury, NJ 08512.

UROLOGY

Jan. '79. Age 29. Nat'l. bds., AB-elig. MD from Cornell. Int., res. and fellowship at Mass. Gen. Hosp. Grp. or assoc. practice in large or med. community. Trained in urologic oncology and would also be interested in pediatrics and/or transplantation if available. Peter T. Nieh, M.D., 103 Locust St., Burlington, Mass. 01803.

Available anytime. Age 35. Conn. License. Nat'l. bds., AB/Surg.-cert., Urol.-elig. MD from Yale. Int. at Hahnemann Hosp., PA. Res's. at St. Elizabeth's Hosp., MA and Walter Reed Army Hosp., DC. Grp. or assoc. practice in large or med. community in Ct. Robert A. Vollero, M.D., 13800 Blair Stone Lane, Silver Spring, MD 20906.

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Tenuate® ©IV
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary
INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.
CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).
WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.
PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.
ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.
DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.
OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633
Direct Medical Inquiries to:
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

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References: 1. Citations available on request — Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M.: A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

Merrell

8-3921 (Y587A)

Whether overweight is a complicating factor... or just uncomplicated overweight.

Tenuate® Dospan® ©IV

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

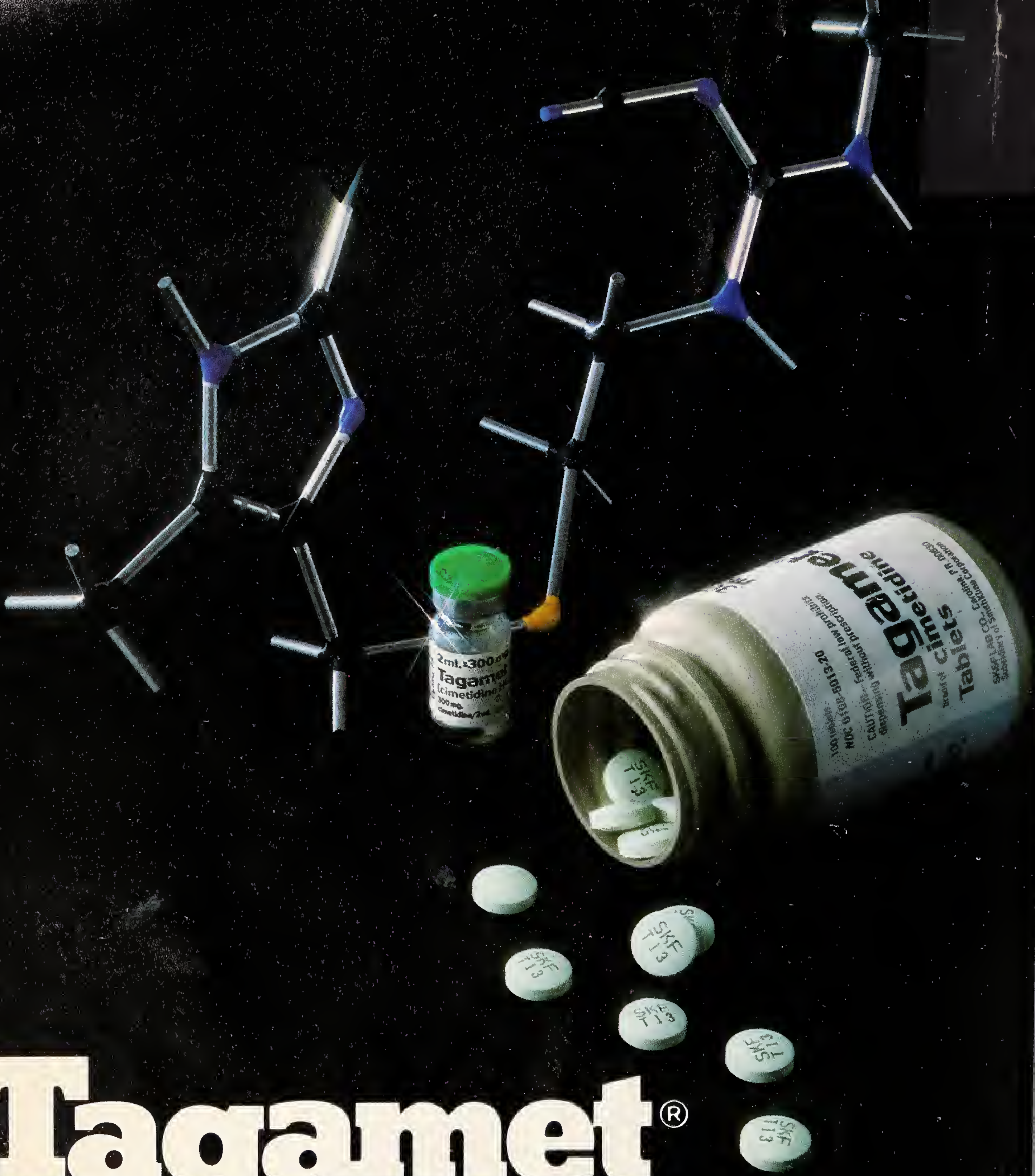
Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

Merrell

For prescribing information see opposite page.



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Injection, 300 mg./2 ml., in single-dose vials in packages of 10.

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Connecticut Medicine

The Journal of the Connecticut State Medical Society

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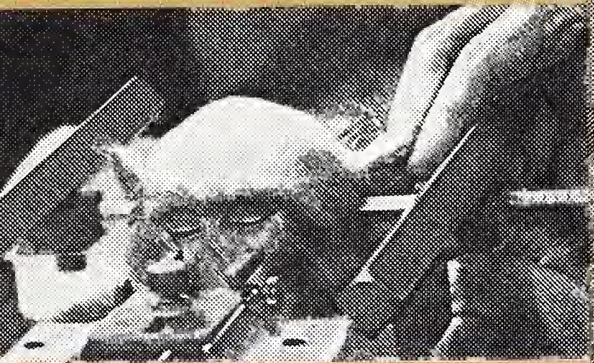

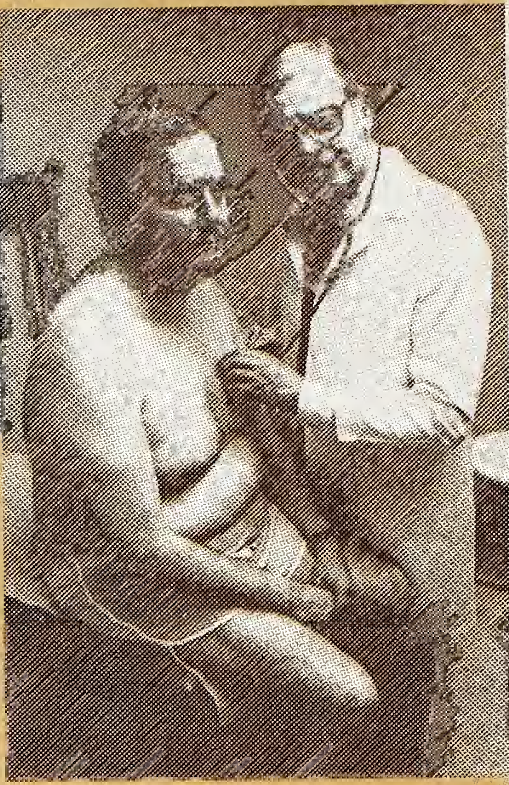

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☐ Predictable patient response

☐ Is used concomitantly with primary medications, such as anticholinergics and cardiovascular drugs

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synonymous with relief of anxiety

Please see next page for summary of product information.

Librium® 5mg, 10mg, 25mg capsules
chlordiazepoxide HCl/Roche

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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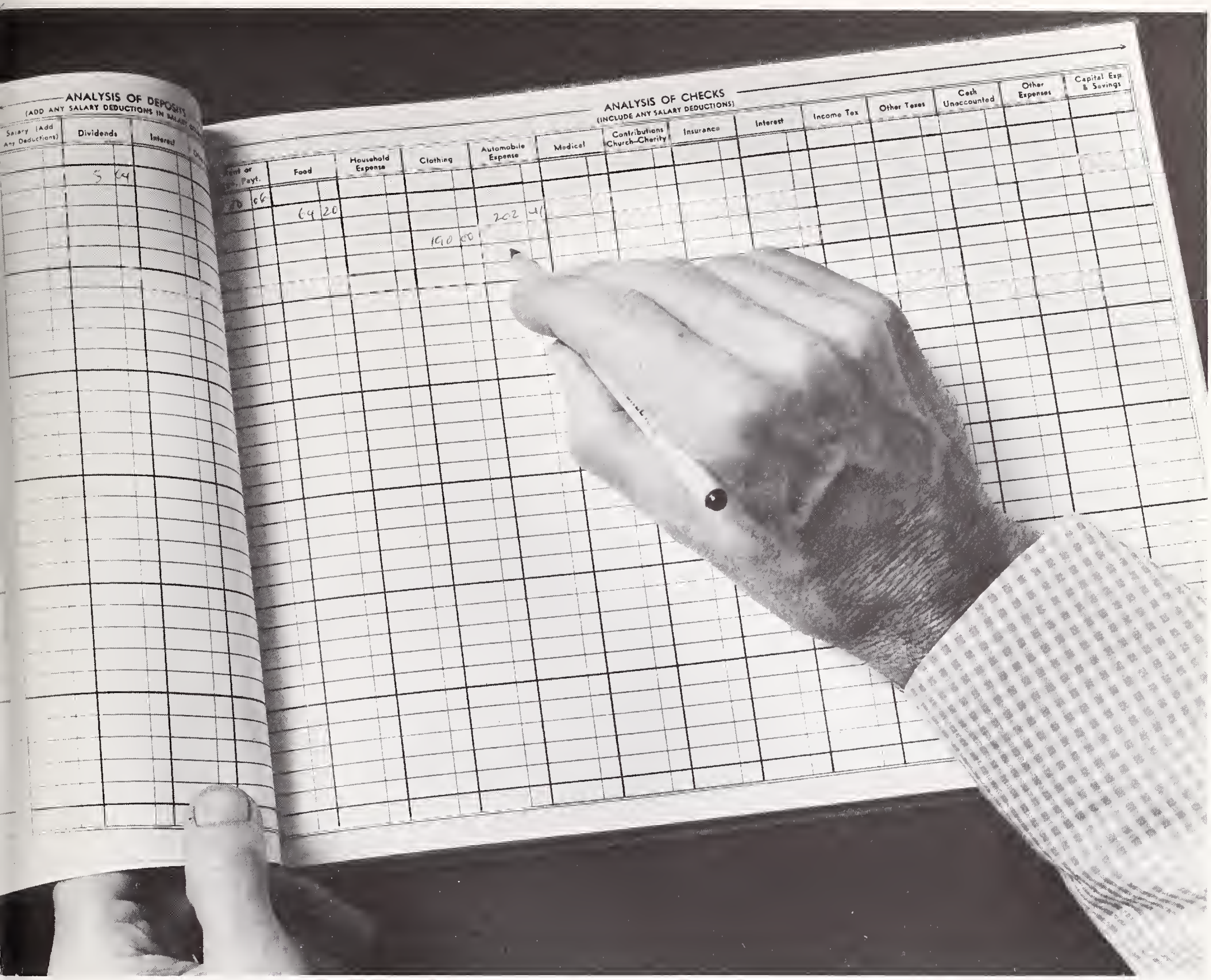

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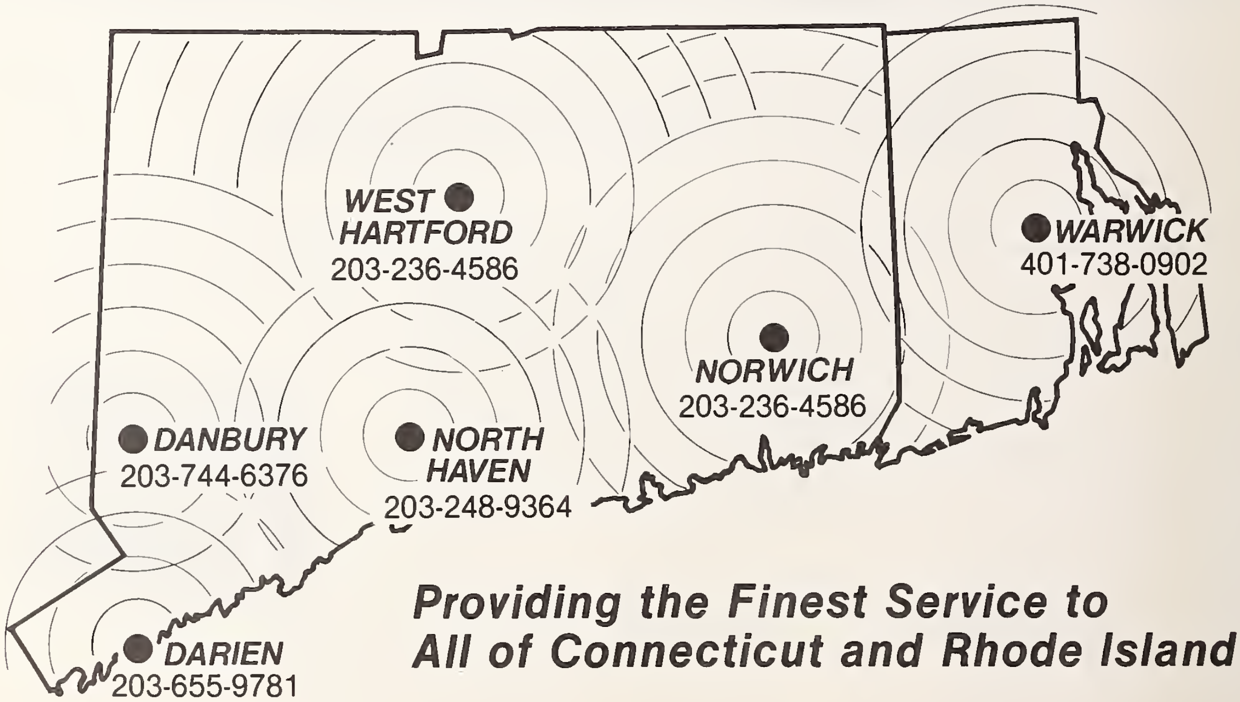

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References:

1. Wilber JA, Barrow JS: Am J Med, *52*:653-663, 1972.
2. Data on file at Boehringer Ingelheim Ltd.

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Adverse Reactions: The most common reactions are dry mouth, drowsiness and sedation. Constipation, dizziness, headache, and fatigue have been reported. Generally these effects tend to diminish with continued therapy. The following reactions have been associated with the drug, some of them rarely. (In some instances an exact causal relationship has not been established.) These include: Anorexia, malaise, nausea, vomiting, parotid pain, mild transient abnormalities in liver function tests; one report of possible drug-induced hepatitis without icterus and hyperbilirubinemia in a patient receiving clonidine hydrochloride, chlorthalidone and papaverine hydrochloride. Weight gain, transient elevation of blood glucose, or serum creatine phosphokinase: congestive heart failure, Raynaud's phenomenon; vivid dreams or nightmares, insomnia, other behavioral changes, nervousness, restlessness, anxiety and mental depression. Also rash, angioneurotic edema, hives, urticaria, thinning of the hair, pruritus not associated with a rash, impotence, urinary retention, increased sensitivity to alcohol, dryness, itching or burning of the eyes, dryness of the nasal mucosa, pallor, gynecomastia, weakly positive Coombs' test, asymptomatic electrocardiographic abnormalities manifested as Wenckebach period or ventricular trigeminy.

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Blood Loss: The Early Killer of the Multiple System Injury Victim

GERALD O. STRAUCH, M.D., F.A.C.S.

ABSTRACT—Multiple system injury may result either in the victim's immediate death or survival. Survival allows opportunity for therapeutic intervention. At present most early failures of meaningful therapeutic intervention result because of hemorrhage and hypovolemic shock. Control of hemorrhage and blood volume restoration are imperative for survival, and much progress has been made in fulfilling these priorities in the injured; however, much remains to be done. Especially is this so in the early post-injury period, when data concerning the injury victim may be sparse, hemorrhage may be occult and from multiple sources, and the critical time allowable for decision-making may be limited to minutes. A few major principles, caveats, and decisions may save many lives which otherwise may be lost to hemorrhage; they are herein emphasized. Special problems in hemorrhage in the injured of current concern are addressed, including hemorrhage from the mouth, bleeding into the chest, and intraabdominal hemorrhage.

This presentation will deal with hemorrhage of severity that jeopardizes survival and demands definitive control within the first hour after multiple system injury.

If multiple system injury does not result in the immediate death of the victim, there is opportunity for therapeutic intervention. Among the priorities for treatment of the victim, the establishment of an effective cardiac pump mechanism and an effective airway come first. Interference with heart action is relatively unusual in the multiple injury patient, in terms of the opportunity for treatment early on, and airway problems can usually be diagnosed and managed quite effectively. Hemorrhage and hemorrhagic shock occupy the next therapeutic priority, and both are common and frequently difficult to manage. Blood loss is therefore the early killer.

Some Characteristics of Severe Early Hemorrhage in the Injured

The injury victim in shock immediately after injury has bled or is bleeding or both! His shock is not septic, is rarely cardiac in origin, is not due to adrenal insufficiency, and is certainly not the result of nonlethal head injury! These statements are trite for the experienced trauma surgeon, but many non-physicians are participating in the early care of the injured in this country today; many physicians caring for the injured are not surgeons; and many surgeons involved in early care of injured individuals are not regularly dealing with multiple system injury. It seems therefore appropriate to stress the hypovolemic nature of shock in the injured because of the obvious urgent treatment implications.

Arterial Hemorrhage. It should be noted that major arterial hemorrhage, from a vessel the size of the femoral artery or larger, will cause immediate, profound hypotension because of the basically unicameral nature of the arterial tree and because no compensatory mechanism is available to sustain arterial pressure. This hypotension is not accompanied by the overt signs and symptoms usually associated with clinical shock during the very early post-injury period, despite the imminent threat to life

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of this form of bleeding, because the syndrome of clinical shock requires some time to develop. Death will result within minutes because of lack of cerebral and myocardial perfusion unless such hemorrhage is immediately controlled, and in the absence of control, death will occur without the syndrome of shock ever having the chance to occur. It is thus quite possible to encounter a patient who is warm, dry, alive but without blood pressure, bleeding from a closed injury to a major artery, and capable of survival; however, he will not be alive for long without someone's decisive action.

Arterial injuries occur, in order of decreasing frequency, in the following body regions:

Upper extremity	48%
Lower extremity	34%
Thoracoabdominal	11%
Head and neck	7%[1]

Over 80 percent of hemorrhage from arteries can be controlled at least temporarily by direct wound pressure alone. Arterial injuries in the neck rarely require heroic measures for control, even in the presence of carotid transection, because massive hemorrhage does not occur or because hemorrhage is controllable by pressure. Thoracoabdominal arterial injuries, on the other hand, frequently require major operation for resuscitation, as stark emergencies.

One unusual problem in arterial hemorrhage in the extremities that may require immediate action is major arterial division or laceration at the juncture of arm or leg with the trunk. Massive hemorrhage, difficult or impossible to control by pressure, may occur here from the femoral or axillary arteries. The intraluminal insertion, followed by inflation, of a Fogarty or small Foley catheter in these circumstances may control hemorrhage promptly and be lifesaving. Definitive repair can then be accomplished at formal operation.

Some special aspects of bleeding from specific arteries will receive attention later.

Hidden Hemorrhage. Hemorrhage occurring in association with closed injuries may be massive, yet associated with deceptively little evidence of blood loss at the site of injury. A thigh, the radius of which increases by as little as two centimeters, may contain four to five liters of blood lost at the site of an artery lacerated by a femoral fracture. An abdomen containing a fractured liver may increase in dimensions by only two centimeters in diaphragmatic elevation and two centimeters in radius but harbor six liters of lost blood. Each hemithorax represents two to three liters of potential space for blood lost by hemorrhage into the chest.

Representative blood loss with closed major fractures includes the following:

Fractured humerus	250 - 1000 ml.
Fractured tibia and fibula	500 - 1000 ml.
Fractured femur	500 - 2000 ml.
Fractured pelvis	1000 - 3000 ml.

It can be seen without difficulty that massive, lethal blood loss can occur in the injured with no overt hemorrhage and with but subtle local signs.

When blood loss in the injured individual is not overt, it must be assessed by indirect measures. The clinician examining the patient can estimate blood loss with a rather high degree of accuracy, for clinical purposes. The patient who is not in shock and exhibits normal blood pressure and pulse has rarely lost more than 20 per cent of his blood volume. When shock is not present bu vital signs become unstable (e.g., postural hypotension), a 20 to 30 per cent blood volume loss may be estimated. This may be but 600-900 ml. in a small woman but 1500-2500 ml. in an athletic, husky man. When clinical shock supervenes, the patient must be assumed to have lost at least 30 per cent of blood volume. The patient with no vital signs has lost at least 50 per cent of blood volume, is bleeding rapidly from a major artery, is suffering from cardiac tamponade, or is dead; the differential diagnosis is obviously of critical importance.

A frustrating problem may develop when shock is present in the absence of overt or apparent closed hemorrhage, or when shock persists after apparently adequate replacement of known blood loss. Rapid solution of this problem is essential and not really difficult if one follows a systematic thought process.

The first requisite is to recheck the assessment of known overt losses; if major losses have occurred from open wounds, they may have been underestimated. Bleeding from the scalp may be much more significant than it seems, or a compound fracture may have bled massively from a torn artery which then spontaneously stopped bleeding.

If one can be sure that open wound losses have been properly assessed, previously unappreciated losses into closed extremity wounds are the next cause of shock to be suspected. Closed head and neck wounds cannot involve major hidden losses, since relatively minor hemorrhage into the head and neck produces catastrophic consequences related to brain, spinal cord, or airway. As noted above, on the other hand, massive losses can occur in arm or leg wounds with sometimes surprisingly little evidence on initial examination. Especially is this true of the thigh and shoulder regions.

If the cause of shock still remains unresolved, the chest can be easily reassessed by clinical examination or chest x-ray or both, for evidence of hemothorax. If one is found, insertion of a large catheter into the chest will improve airway mechanics and give quantitative information about the blood lost at the same time.

Having failed to find the cause for shock to this point, one must conclude that the blood loss is hidden in the abdomen, either as a pelvic hematoma associated with pelvic fractures or as intraperitoneal hemorrhage from visceral injury. (Rarely will upper abdominal bleeding into the retroperitoneum produce early shock, in the absence of intraperitoneal hemorrhage, but in that event, a rapidly enlarging flank mass will almost always be in evidence.) If pelvic fractures are ruled out by clinical and x-ray examination, the issue can be rapidly settled by the performance of diagnostic paracentesis[2]. Under these circumstances, peritoneal lavage is usually rendered needless by the gush of blood returned when the lavage cannula is inserted.

The entire assessment of shock without apparent source of blood loss should be possible in a matter of a few minutes. While it is true that a long list of causes of persistent shock in surgical patients, aside from hemorrhage, is known, these causes are not even worth considering in the early management of the injured unless the preceding hemorrhage evaluation has been carefully and expeditiously concluded. The soundness of this reasoning undoubtedly has been demonstrated countless times in every busy emergency department dealing with multiple system injury.

Initial Treatment of Severe Early Hemorrhage in the Insured

When massive hemorrhage occurs in the immediate post-injury period, control of the site of bleeding is the initial management consideration. If this is readily achieved, resuscitation is greatly simplified. More often than not, hemorrhage is from multiple sources, not all of which are immediately controllable, and shock is or rapidly becomes evident. Once a satisfactory airway has been assured and ventilation is established, large-bore intravenous cannulas must be inserted. At least two are desirable, and thought must be given to the possibility that major venous tears or obstructions may exist between the site of infusion and the heart. Such thought will influence the placement of infusion sites in individual patients.

If hemorrhage is apparently confined to anatomic locations below the diaphragm, consideration of the use of a G-suit or of military anti-shock trousers (MAST trousers) may be of real value.[3] [4] Vital organ perfusion may be improved, and hemorrhage may be substantially diminished.

For practical purposes, initial infusion fluids for resuscitation in the severely injured in the United States are now limited to crystalloids. Most surgeons prefer lactated Ringer's solution; however, physiologic saline solution (normal saline) is probably equally effective. A discussion of the advantages and disadvantages of other initial resuscitation fluids is beyond the scope of this presentation. Whole blood will be necessary in the circumstances under discussion and should be employed as soon as it can be obtained. Typing can be performed so rapidly that type-specific blood should be available, if it is in the blood bank, immediately. Cross-matching is wise if time permits. O-negative blood is safe, if needed, in extraordinary circumstances.

Autotransfusion apparatuses are now commercially manufactured, but autotransfusion has limited applications in resuscitation efforts and has not gained wide acceptance to date.

The volume of infusion will depend on the estimated volume of blood loss and the nature of the replacement fluid. The aim must be to restore tissue perfusion to as nearly normal as possible. As previously inferred, loss of a substantial proportion of blood volume ordinarily occurs before evidence of hypoperfusion and shock supervenes, a tribute to the body's compensatory mechanisms. As a consequence, modest blood loss is well tolerated. In circumstances such as those under discussion here, the need for replacement of large losses is apparent, and replacement requirements can be expected to exceed estimated losses in the severely injured because of the pathophysiology of human injury response; as a matter of fact, such "over-replacement" is virtually a hallmark of successful resuscitation. Crystalloid infusion, volume for volume, cannot be expected to provide as effective replacement for acute blood loss, in physiologic terms, as whole blood; however, neither is exclusive use of whole blood optimal in the severely injured. Crystalloid, infused in appropriate volumes, is extraordinarily effective in restoring tissue perfusion and cellular metabolism, even in unusual circumstances when blood is not available for transfusion in adequate quantities to maintain normally acceptable oxygen-carrying capacity. Moreover, with the logistics of modern resuscitation allowing for large infusion volumes within minutes, the potential problem of "overshoot" in volume replacement is regularly present and, if it occurs, is better tolerated and more easily managed if the hypervolemia has been more a function of crystalloid infusion than of blood transfusion.

The rate of infusion required is that which will reverse clinical evidence of hypovolemia in the shortest possible time. Rising blood pressure, falling pulse rate, improvement in peripheral venous filling, and reversal of clinical shock provide gross bedside determinants of the efficacy of blood volume replacement; however, monitoring of urinary output and of central venous pressure provide more reliable measures and are readily available. In complex situations, placement of a pulmonary artery catheter of the Swan-Ganz type will be required to provide more precise assessment of left heart function and tissue perfusion than otherwise available; however, in the immediate management of the injured, pulmonary artery catheterization is very uncommonly of decisive value.

In actual practice, infusion of two liters of lactated Ringer's solution as rapidly as possible will suffice to reverse the evidence of clinical shock in many injured adults. This volume can be administered with virtually total safety, even within an interval of several minutes, to the adult patient whose blood loss causes overt signs and symptoms of hypovolemia. In children the initial volume infused to combat shock should be approximately 25 milliliters of lactated Ringer's solution for each kilogram of body weight. In some injury victims, this initial infusion may obviate the need for blood transfusion; in the severely injured, however, continuing volume replacement will be required, and transfusion will be necessary.

When shock proves unresponsive to management, even when blood volume replacement has been shown to be adequate by reliable monitoring systems, treatment becomes more involved, but a consideration of recalcitrant shock is beyond the bounds of this discussion.

Specific Sites of Hemorrhage

I would now like to make some brief comments about certain sites of hemorrhage, requiring immediate management in multiple injury victims, which are of particular interest at present because of recent developments in injury treatment. These sites will be discussed in roughly decreasing order of priority of management, although all are obviously capable of producing death within minutes. I believe these comments will demonstrate the necessity for facilities for formal major operations in or immediately adjacent to the emergency department in hospitals managing patients with multiple system injuries.

Cardiac Hemorrhage. The patient with traumatic cardiac hemorrhage who enters the emergency department alive has a surprisingly good chance for complete recovery if proper management is pursued. Diagnosis is usually suspected because of a penetrating chest wound in the region of the heart and is confirmed by evidence of cardiac tamponade. Immediate pericardiocentesis will usually alleviate tamponade, but operation to repair the cardiac injury is definitive and should be undertaken without delay.[5] Cardiopulmonary bypass is not a requisite for undertaking cardiac repair, except as a rarity.[6] The repair of cardiac lacerations is not difficult and usually is performed by surgical resident staff in institutions where most cardiac lacerations are encountered, with impressive results.

Oropharyngeal Hemorrhage. Severe and uncontrollable bleeding from the mouth or pharynx may be encountered in the emergency department as a result of facial smashes. The most immediate threat to life is airway compromise, and tracheal intubation will be mandatory to establish a reliable ventilation route. Tracheal intubation through the mouth or nose is the easiest and preferred method; however, blood, hematoma, and anatomic disruption may make orotracheal or nasotracheal intubation impossible. Moreover, the possibility is always strong that a fracture of the cervical spine exists in these patients, making manipulation of the neck for orotracheal intubation a hazardous undertaking frequently. Immediate cricothyroidostomy will solve this problem in seconds;[7 8] tracheostomy in this setting is contraindicated, though its subsequent performance may be desired.

Abdominothoracic Hemorrhage. It goes without saying that any patient's life is jeopardized by hypovolemic shock, and the longer shock persists, the more serious the situation becomes. At present there seems little justification for an injury victim to be allowed to remain in shock for more than 20 minutes in the emergency department without the benefit of definitive action. The patient most likely to suffer from delay in decisive treatment is the patient bleeding into his chest or abdomen or both. Since hemothorax is easily diagnosed and demands placement of a thoracostomy tube, the amount and rate of hemorrhage from the chest cavity can usually be assessed accurately, provided the tube is patent, the diaphragm is intact, and the tube is positioned to drain collected blood effectively. Continued active bleeding equivalent to over 250 ml. of blood per hour will force thoracotomy. Intra-abdominal hemorrhage, as previously noted, will be detected with a high degree of accuracy by diagnostic paracentesis. In any event, if infusion of lactated Ringer's solution equal to one-half the patient's estimated blood volume, or transfusion of whole blood equivalent to 15 to 20 per cent of estimated blood volume in a 20 minute period does not result in measurable and steady hemodynamic improvement, the patient with known bleeding into the chest or abdomen is a strong candidate for undergoing open thoracotomy or laparotomy as a resuscitative measure.

Thoracic aortic rupture usually causes rapid death within minutes of injury; however, increasing numbers of patients are being encountered whose aortic ruptures do not result in immediate exsanguinating hemorrhage and who thus are candidates for definitive repair. Furthermore, as evacuation of patients to hospitals increases in rapidity, patients who are not dead but are doomed to die within minutes because of thoracic aortic rupture are being encountered in hospitals with increasing frequency. Whereas in the past, cardiopulmonary bypass was considered a sine qua non for the repair of the commonest site of traumatic thoracic rupture (at the level of the ligamentum arteriosum), the use of the heparinized shunt has allowed repair without bypass, and there is now strong indication that direct repair, without provision for distal perfusion during repair, may be associated with no higher incidence of ischemic damage to the spinal cord than when bypass or a shunt is utilized[9]. The surgeon thus is under high pressure to render almost instantaneous decisions and to proceed with crash thoracotomy, provided repair of the ruptured aorta is a credible option with the personnel and facilities available. Admittedly, patient salvage under such conditions is not presently anticipated to be great, but the attempt seems mandatory.

Intra-abdominal hemorrhage is far and away the leading indication for laparotomy in patients with multiple system injury. Once the decision for laparotomy as a resuscitative measure has been made, the incision should be vertical and in the midline, and the surgeon should know that there may be cause to extend this incision not only from xiphoid to pubis, but from suprasternal notch to perineum. Splitting the sternum has proved a superb method for approaching some of the most difficult problems of hemorrhage in the region of the liver, and incision through the pubic symphysis may afford sorely needed access to certain devastating pelvic injuries. Exposure of the great abdominal vessels is ordinarily obtained by reflecting the gastrointestinal tract off the posterior parietes, through embryonic planes of fascial fusion, from the left upper or right lower abdominal quadrants, depending on the necessity of exposing the vessels above or below the renal vasculature[10].

Bleeding from the inferior vena cava is usually controllable by pressure with subsequent application of suitable vascular clamps. When injury to the inferior vena cava is below the renal veins, ligation to control exsanguinating hemorrhage from a badly disrupted vessel is not a difficult decision, even though caval repair is optimal. Repair of the vena cava is preferable to ligation even if moderate stenosis results or if repair of an injury to the posterior caval wall necessitates repair through an anterior venotomy. Injury to the inferior vena cava above the level of the renal veins remains a very difficult technical challenge, and the various shunts devised to isolate this caval segment have not proved of breakthrough value in the hands of most surgeons managing this type injury[11]. Sequential clamping of the aorta and vena cava has seemed to suffice in most instances of successful management, when total caval occlusion has been required, and both autogenous grafting of the suprarenal inferior vena cava with an infrarenal caval segment and suprarenal inferior vena caval ligation have been employed successfully in managing these injuries.[12] [13] Repair of the injured suprarenal inferior vena cava is preferred, if possible.

The shattered liver frequently is associated with formidable bleeding, and death from hemorrhage in many of these patients may not be preventable until prehospitalization methods for control of massive intra-abdominal hemorrhage are vastly improved. When severe hepatic hemorrhage is encountered at operation, effective immediate control measures are needed. Temporary occlusion of the hepatic vascular inflow by cross-clamping the portal vein and the hepatic artery in the hepatoduodenal ligament with a vascular clamp (Pringle maneuver), temporary packing of the liver injury, or direct pressure on the liver usually suffice. Definitive control requires definitive surgical maneuvers if bleeding persists when clamps, packs, and pressure are removed. Anatomic hepatic lobectomy to control the hemorrhage of trauma has been largely abandoned because of its prohibitive mortality. Hepatic artery ligation may occasionally be lifesaving[14] but only in the unfortunately uncommon instance in which hemorrhage from the liver is arterial in origin. In most circumstances, bleeding is from hepatic veins within the liver. The use of omentum as a viable liver packing, as recently described by Stone[15] provides a useful solution to these difficult problems.

The seasoned trauma surgeon will shun the massive pelvic hematoma associated with pelvic fractures if at all possible. If such a hematoma is encountered at operation for other abdominal injuries, the peritoneum over it is not disturbed unless the main arterial channels to the legs are felt to be jeopardized. If uncontrollable hemorrhage from such a hematoma occurs at operation for whatever reason, more lives will probably be saved by abdominal closure and application of a G-suit, with consideration given to intervention radiology (embolization of bleeding vessels with Gelfoam or autologous clot or muscle), than by persistence in attempting to control hemorrhage with the abdomen open.

Conclusion

With increased speed of evacuation and improved prehospital care, more and more injury victims who in the past would have died of hemorrhage prior to arrival at a hospital are being brought to hospital emergency departments alive. If these victims are to be saved, those who care for them must be immediately available, capable of swift and decisive action, and in possession of proper work areas and equipment. Those who are responsible for the care of the injured must lead the effort to ensure the optimal quality of that care.

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Photochemotherapy for Psoriasis—PUVA Breaking through "The Heartbreak"

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Photochemotherapy is a newly developed therapy for generalized psoriasis which is both effective and highly successful in the treatment of this tragic, disfiguring disease. Photochemotherapy is the combination of Psoralin (methoxsalen), a super tanning medication, and high intensity *UV-A* which is commonly known as black-light. This therapy has been labeled with the acronym PUVA. PUVA is still investigational at this time.

Photochemotherapy has attracted world wide attention over the past two years. This treatment can be applied in a way which is relatively easy for the patient as compared with previous successful therapies such as Goeckermann, which requires tedious and extensive application of tars, and methotrexate which is dangerous. PUVA is highly effective in that it will clear 95% of patients of almost all of their psoriasis and at the same time give the patient an attractive tan. The results are impressive as can be seen in Figure 1. PUVA appears to have an acceptable risk-benefit ratio.

Photochemotherapy was introduced over the past three years by Dermatologists at Harvard and the University of Vienna.[1] A sixteen center cooperative trial was organized by this group and has provided much of the statistical data for this program. We undertook to provide PUVA in an office setting so as to be able to offer this treatment to severely involved patients and to determine the practicability of PUVA in a private office setting. After preparation of a protocol and supporting drug information provided by the Paul B. Elder Company a physician sponsored Claimed Investigational Exemption for a New Drug (IND) was approved by the FDA.

Each patient in this program signed an informed consent volunteering to be part of this clinical trial.

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Methods

We began our program in January, 1977 and will describe our experience in 40 patients entered within the first 10 months. Actually 44 patients were entered but four dropped out before meaningful data could be obtained. Two patients were accepted as transfers from other PUVA centers (MGH and NYU).

One patient (A20) was dropped after the fourth treatment because cataracts were found in her pretreatment eye examination. She is not included in the data but it is interesting to note she cleared entirely in the four treatments and had a mild relapse only after many months.

In general patients who entered the study had psoriasis involving 30% of their body or had psoriasis which was psychologically or physically incapacitating. Four patients had been on methotrexate before. Two patients with liver abnormalities were entered on PUVA with no psoriatic lesions showing as a way of getting off methotrexate.

Prior to treatment patients received complete eye examinations by their personal ophthalmologist. The following laboratory studies were performed: CBC, urinalysis, SMA-12, serum creatinine, and ANA. Photographs of the entire body were taken. No other systemic medications for psoriasis were given. On occasion, topical medications for resistant areas such as the scalp were also used. Emollients were used often.

The age of the patients ranged from 25 to 57 years.

Methoxsalen was taken according to body weight, two hours prior to scheduled treatment. The source of the methoxsalen was the commercially available 10 mg. capsules known as oxsoralen and obtained from the Paul B. Elder Company of Bryan, Ohio. Methoxsalen has been available as a "legend" drug for over 20 years. It has been used principally for repigmentation of vitiligo and extreme sun sensitivity.

The UVA source was a 48 bulb high intensity light system developed by National Biological Corporation and General Electric. It is essentially a light closet (Figure 1). The bulbs are six feet long with a significantly greater output than ordinary black light bulbs. The lamps emit UV light in a spectrum of 320 to 400 nm with a peak at 350-360nm.

An external reflector system is incorporated into the walls of the box. The unit has a timer and a meter to measure hours of operation of the bulbs. Output of light was measured by a National Biologic LM 301 Photometer. Readings were taken daily and the time was adjusted in order to maintain light energy output. UVA exposure was recorded in joules/cm^2 and minutes.

A phototherapy center was created in an adjacent office because of the needs of this program. The UVA source produces considerable heat which is removed by large fans which provide a significant amount of noise. Patients with generalized psoriasis have immense personal and psychological problems which demand a private area where patients are free to share their problems with the therapist. The phototherapy center is staffed by Judith Valente, R.N. who was always in attendance and devoted full time to this program.

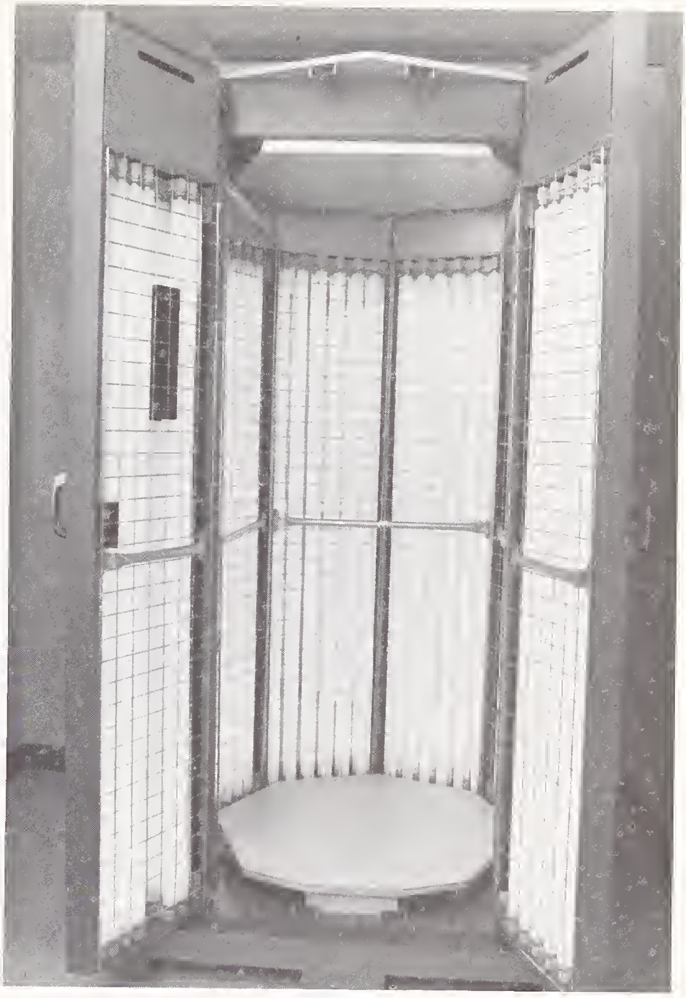
Figure 1
UVA Source

Goggles are worn over the eyes during therapy to block UVA. Sunglasses were worn by the patients from the time of taking the methoxsalen to the end of the afternoon on all days in which the medication was taken. The patient's sunglasses were tested for their ability to block UVA.

The initial UVA treatment dose was based upon the patient's skin type. Skin color was classified from I-VI (blacks) and the initial dosage varied from 0.5 joules/cm^2 to 3.0 joules/cm^2. The usual initial dose was 1.5 joules cm^2. Exposure time was increased 0.5-1.0 joules/cm^2 at each treatment depending upon clinical response. Frequency of visits was two times per week during clearing (C2). When the patient's psoriasis had cleared, the treatment schedule was reduced to either once a week (M1), once every other week (M2) or once every third week (M3) during maintenance. If the psoriasis resumed or flared during maintenance the frequency of visits were increased.

Evaluation of Results

The clinical response was graded according to the following:

- Grade 0, No change, 0% improvement
- Grade 1, Poor-minimal improvement, 5-20% improvement
- Grade 2, Fair-definite improvement, 20-50% improvement
- Grade 3, Good-considerable improvement, 50-95% improvement
- Grade 4, Excellent-complete clearing, >95% improvement

Grade 4 meant that the patient was clinically clear; though a few areas of psoriasis could be found, the skin was essentially normal. Patients were examined by a physician approximately every 2-4 weeks during the clearing phase and every other month during maintenance. A dermatologist, in addition to the nurse-therapist, was almost always available for consultation and adjustment of therapy.

Results

The therapeutic results of PUVA were excellent and beyond expectation. These are summarized in Table 1. Thirty-eight out of 40 patients (95%) obtained either excellent or good results. Ninety percent of patients obtained clearing of 95% or more of their psoriasis (Figures 2-3)

An average of 23 treatments were required for clearing which, because we elected to treat only two times per week, took place over 10-12 weeks (Table 2).

The average number of joules per square centimeter at clearing was 18. During therapy the dose of UVA was increased about 1 joule per treatment unless therapy was rapidly progressing. If the patient was obviously improving, the previous time was maintained.

Table 1
CLINICAL RESULTS OF PUVA

	Response			
No. of Patients	*Excellent*	*Good*	*Fair*	*Poor*
40	36 (90%)	2 (5%)	0	2 (flare)

95% good to excellent

Table 2
NUMBER OF TREATMENTS TO CLEARING

Average	*Range*
23	4-62

Side Effect

Two patients with severe erythrodermic psoriasis developed a generalized erythrodermic flare which required hospitalization. The first patient flew to Florida and exposed himself to the sun one day following a PUVA treatment. Subsequently he developed an erythema which progressed over five weeks. He was hospitalized at the West Haven Veteran's Administration Hospital, treated initially with wet dressings and topical steroids and later Goeckermann therapy. His skin cleared but the original psoriasis recurred one month later.

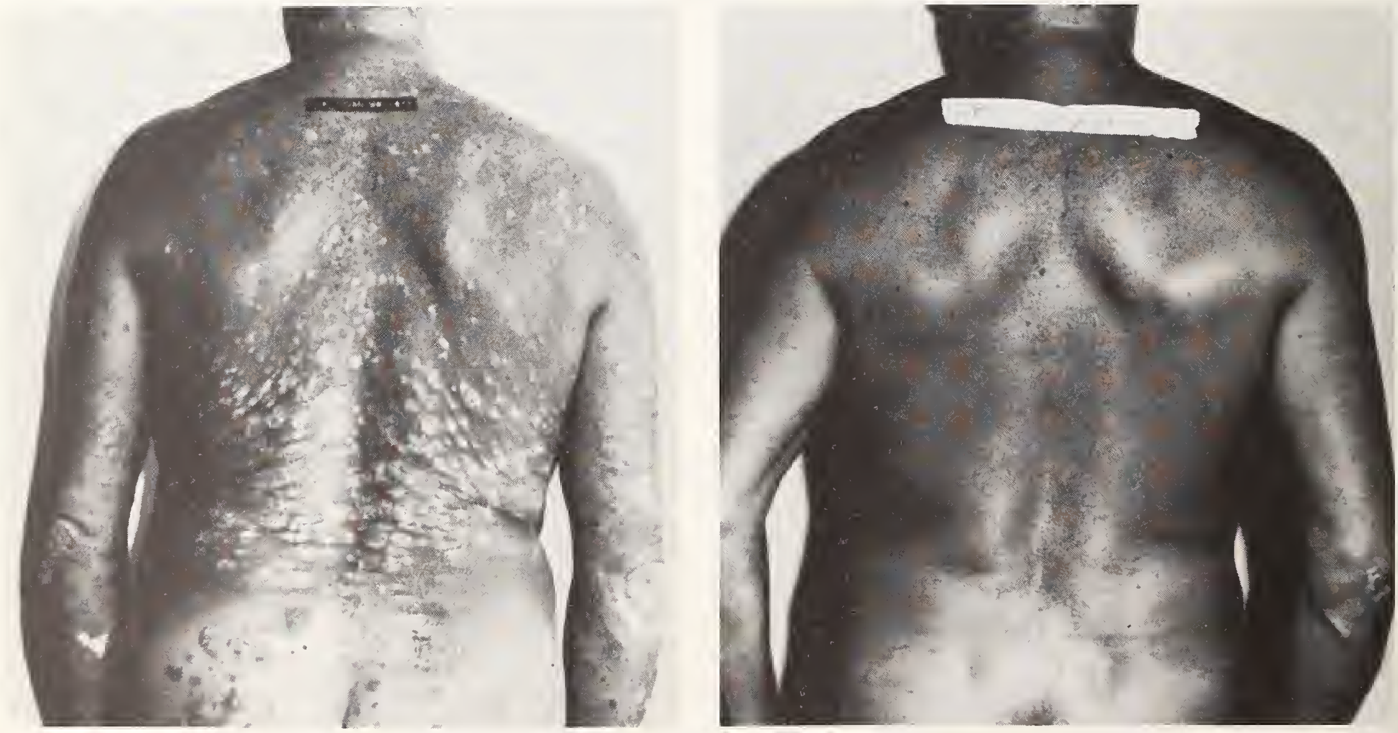

Figure 2
Left, patient before PUVA. Right, patient after treatment (25 exposures).

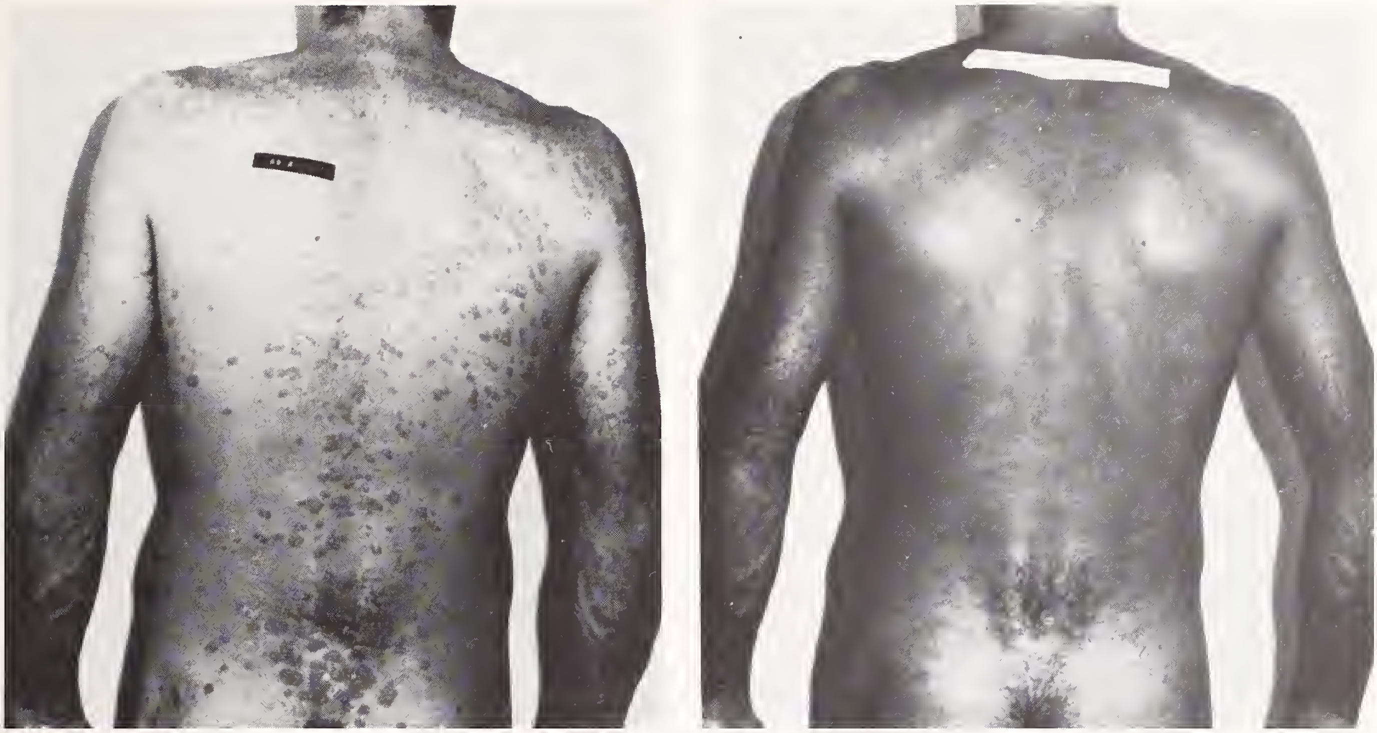

Figure 3
Left, patient before PUVA. Right after 25 exposures.

The second patient improved during the initial phase of clearing but flared into an exfoliative dermatitis. The patient was hospitalized at Yale-New Haven Hospital where he was treated with open wet dressings and topical steroids; the dermatitis improved rapidly and the psoriasis almost cleared. His skin is presently involved with a generalized mild erythroderma with exfoliation. The patient is quite pleased and wishes no further therapy at this time. This patient was also on oral diuretics.

Six of our patients developed pruritus and mild erythema two weeks after therapy began. The pruritus was treated with hydroxyzine and emollients and eventually resolved. Some patients were asymptomatic bejow 11 joules per cm^2, but developed pruritus and erythema above that exposure. A few patients developed nausea while taking the methoxsalen but this problem was resolved or controlled with fractionation of the dose or lowering the total dose.

Complications Unrelated to PUVA

The following complications are believed to be unrelated to PUVA. One patient with a history of bleeding duodenal ulcer developed a bleeding duodenal ulcer which was controlled by hospitalization and bland diet. The patient's skin cleared completely on PUVA. This patient currently resides in another country though we continue to treat him when he is in Connecticut.

Another patient developed wide spread pruritus, excoriation and erythema which was baffling until a scraping from the web spaces of the hand revealed scabies. Treatment with gamma benzene hexachloride 1% produced complete resolution of his symptoms.

Individual patients developed the following problems which also are not related to photochemotherapy: thrombophlebitis of the leg, myocardial infarction, bursitis, and an isolated seizure of unknown etiology.

Results in Maintenance Therapy

Regular photochemotherapy treatment on a less frequent basis was effective in maintaining clearing of the psoriasis in most patients (Table 3). They were

Table 3
RESULTS OF MAINTENANCE—PERCENT IN REMISSION

Total - Days in treatment	*Number of Patients*	*Excellent (95% clear)*	*Good (50-95% clear)*	*Fair (20-50% clear)*	*Poor (0-25% clear)*
250-350	17	70	30	0	0
150-250	26	76	24	0	0
< -150	38	86	14	0	0

best maintained with treatments every week or every third week (Table 4). In that group of patients maintained for over 250 days, 70% were 95% clear (excellent) and 30% of the patients were 50-95% clear (good). There were no fairly or poorly responding patients but that was probably because the frequency of treatment increased when the psoriasis began to recur significantly.

Table 4
FREQUENCY OF TREATMENT DURING MAINTENANCE

Frequency of Treatment	*Number of Patients*	*Percent*
Twice weekly (C2)	1	4%
Once weekly (M1)	9	33%
Once every two weeks (M2)	4	14%
Once every three weeks (M3)	12	45%

Comment

Our experience with photochemotherapy in a private practice setting corresponded in general with the reports of Wolff, Fitzpatrick and Parrish,[1] and Roenigk and Martin.[2] Photochemotherapy is effective and far more convenient and practical for the patient with extensive psoriasis than Goeckermann therapy or topical steroids. Though a modified Goeckermann program including daily UV therapy on an ambulatory basis is also quite effective, the demands on the patient as to daily visits and applications of messy and malodorous tars make Goeckermann an undesirable second choice. The application of topical steroids to large areas of psoriasis is generally not satisfactory because the salves are bothersome to apply, and the maintenance requires daily or twice daily inunction. Remissions with topical steroids are neither complete nor lengthy. Methotrexate produces a significant remission in many patients but the risk is acceptable to very few patients or their physicians.

Summary

PUVA is an outpatient treatment and may be easily and appropriately administered in a private practice setting. We did not merely place a light booth in a corner of an existing treatment room and add PUVA to our choice of treatments. A Phototherapy "Center" was created in an adjacent office by placing a professionally designed light source in a room large enough to permit sufficient loss of heat. The Center also contained a nurse's office, a bath and a dressing room. A 48 bulb light booth produces a great amount of heat and adequate ventilation or air conditioning is necessary. Installation in a small room produces a short bulb life as well as miliaria and syncope in the patient.

A nurse-technician devoted full time to administering the treatments. The intensity of UVA was monitored daily and the exposure was adjusted accordingly. Detailed records were maintained which included laboratory results, treatment records and close monitoring of the concurrent medical problems. Psoriatics with extensive disease have many psychological problems related to their disfigurement which requires a fair amount of time on the part of the nurse-technician to give supportive psychological advice. Because of the psychological needs of psoriatic patients to vent their frustrations, the PUVA area should be relatively private and unhurried.

The results of photochemotherapy were spectacular. There was 95% clearing of the psoriasis in 95% of the patients. We have seen patients clear before with Goeckermann therapy or Methotrexate; yet is is nevertheless remarkable to see large numbers of severely involved psoriatics clear in predictable fashion. Patients who were withdrawn blossomed forth with personality as their psoriasis faded. The tanning of the skin, which is an unavoidable side effect, was attractive and caused comments of envy from friends. Though formerly "untouchables," these patients became admired.

The remarkable clearing of the psoriasis produced a reluctance to complain for fear that PUVA would be withdrawn. One patient mentioned previously, with bleeding duodenal ulcer, stomach pain, and a hematocrit drop of 20mm suffered silently until his wife secretly called to report of his symptoms. To our knowledge, the bleeding ulcer was not related to PUVA.

Maintenance therapy was also quite effective. All of the patients who participated in the maintenance phase were rated either excellent or good. Seventy percent (70%) of patients remained clear and 30% stayed 50-95% clear. Most patients required a treatment every 1-3 weeks. Two patients (12%) required two treatments per week for maintenance at times.

Long-term side effects of photochemotherapy are unknown if indeed there are any. Methoxsalen and other psoralens have been used in combination with ultraviolet light and sun light in the treatment of vitiligo for over 20 years without adverse systemic effects.

Animal studies have shown that the parenteral injection of excessive doses of methoxsalen and UVA has resulted in cataracts and squamous cell carcinomas of the skin, but therapeutic doses of methoxsalen and UVA in animals and man have not produced these findings.[1] Nevertheless in patients undergoing photochemotherapy, the skin and the eyes should be carefully monitored by careful examination at appropriate intervals.

Considering the risk involved in any new treatment and the difficulty, risks, and inadequate results with existing therapies, photochemotherapy appears to be the most effective and practical therapy for generalized or extensive psoriasis. Though this therapy demands an appropriate setting and well trained and concerned personnel, photochemotherapy is an outpatient procedure that is easily administered in a well planned private practice facility.

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Diabetes Mellitus, Primary Optic Atrophy and Sensorineural Deafness: A Rare Syndrome

GAIL E. SOLOMON, M.D., CHARLES S. KLEINMAN, M.D. AND
PHILIP ZWEIFACH, M.D.

The association of optic atrophy with juvenile diabetes is infrequently observed, but the relationship is not simply fortuitous. There are a number of syndromes which have in common diabetes mellitus and optic atrophy. It is difficult to establish sharp distinctions between such syndromes because of overlapping signs and symptoms. The patient whom we have studied is a 17-year-old girl with juvenile diabetes mellitus, bilateral optic atrophy, and in addition the distinguishing characteristic of symmetrical sensorineural high-tone deafness. These three findings constitute a symptom complex that has been described in only 48 patients since 1938.

Case Report

L.H. was born 6/21/58. At 6 years of age, after presenting with polydypsia and polyuria, the diagnosis of diabetes mellitus was established. She was managed with NPH insulin. At 11 years of age she began to manifest decreasing visual acuity and within 1 year bilateral optic atrophy was noted. A routine school audiogram at age 13 years revealed high-tone sensorineural deafness. She was admitted to The New York Hospital for the first time at age 14 years. Physical examination revealed 20/100 visual acuity in both eyes, bilateral optic atrophy and bilateral central scotomata. There was variable field loss temporally in the right eye. Diabetic retinopathy was absent and there was no retinal pigmentation. Height was on the 50th percentile and weight on the 25th percentile for age, and she was in early puberty (Tanner IV). Neurological examination was within normal limits. Laboratory evaluation included normal electrolytes, complete blood count, urinalysis, BUN, T3 Resin uptake, PBI, cholesterol, 24-hour urinary 17-hydroxy—and ketosteroids, plasma cortisol, LH, FSH, and nonreactive VDRL. Skull x-rays showed normal sella turcica and optic foramina. Electroencephalogram (EEG) showed diffuse spike and wave activity with no consistent focal features. Radioisotope brain scan and pneumoencephalogram were normal. Cerebrospinal fluid revealed no WBC, negative cytology, and a protein content of 35 mg%, with a normal electrophoretic pattern.

Family history was negative for consanguinity, diabetes mellitus, deafness or blindness. Examinations of her parents and her siblings revealed no nerve deafness, optic atrophy or abnormal blood sugars. One sibling was noted to have perceptual motor abnormalities and another had a mild conductive hearing loss, secondary to chronic otitis media.

She was readmitted at age 15 years because of further decrease in visual acuity to 20/200 in both eyes. At that time, peripheral visual field cuts could not be demonstrated. The physical examination was changed only in that she was now Tanner V. Repeat pneumoencephalogram showed that the suprasellar cisterns were not well filled and there was a suggestion of expansion in the region of the third ventricle. Anterior recesses of the third ventricle appeared normal in position but in comparison with the prior study, the optic recess was shorter. These findings were equivocal in the area of the optic chiasm, and a small lesion near the optic chiasm could not be excluded. Repeat isotope brain scan was normal. EEG demonstrated left-sided focal features. Audiometry documented symmetrical sensorineural hearing loss above 1000 Hz. Cold water calorics demonstrated normal vestibular function.

One month later, the patient had two episodes of confusion, in association with right-sided facial and shoulder twitching. There

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was no loss of consciousness or incontinence. Her FBS was 168 mg%. Her neurologic examination showed no signs of increased intracranial pressure or focal motor deficits, but did reveal slight left-sided dysmetria. Phenytoin (Dilantin) was started and no further seizures occurred.

Two months later, peripheral nerve conduction studies showed evidence of peripheral neuropathy.

Six months later, she was readmitted for the third time due to continued subjective deterioration of visual function over a six-week period. Physical examination revealed bilateral optic atrophy and horizontal end point nystagmus. Neurologic examination demonstrated decreased vibratory and pinprick sensation in the lower extremities, slight left dysmetria, and symmetrical reflexes with flexor plantar responses.

Computerized transaxial tomograph scan (CTT) was negative, but review of the pneumoencephalogram (PEG) performed 6 months earlier again suggested a possible lesion at the chiasm.

She underwent a right frontal craniotomy. Exploration of the optic nerves and chiasm was negative.

Follow-up reveals that she is currently enrolled in a school for the blind. She has only light perception vision. Her hearing tests have shown progressive deterioration. Serial ECG's demonstrated ST-T wave changes compatible with myocardial damage.

Discussion

Although rare, the combination of diabetes mellitus and optic atrophy without diabetic retinopathy has long been described.[1] This has been demonstrated within sibships. In fact, this association has been used to support the view that a proportion of cases of juvenile diabetes mellitus may be recessively inherited.[2]

In about ½ of the reported cases of optic atrophy and diabetes mellitus in the world's literature there has been associated deafness in many cases demonstrable within the first decade of life.[3]

It is important prognostically to distinguish these patients from those with optic atrophy in association with chiasmal tumors or those with a variety of heredodegenerative neurologic syndromes, including Charcot-Marie-Tooth neuropathy, Fredreich's ataxia[4] (spinocerebellar degeneration, atypical pigmentary degeneration of the retina and diabetes in 20% of cases), Refsum's syndrome[5] (phytanic acid storage), Lawrence-Moon-Biedl syndrome and Alstrom's syndrome (juvenile diabetes mellitus, retinal degeneration, deafness and obesity).[6] [7] Several additional reports exist of such patients who also have diabetes insipidus[8] [9] or neurogenic bladder and obstructive uropathy.[3]

It is difficult to clearly define the boundaries of these syndromes, due to the fact that cases may differ in only one feature. Many of the patients, our own included, appear to form "links" between syndromes, implying a common basic genetic disturbance.

Rose[2] states that due to the progressive nature of these conditions, further characteristics may develop which change the clinical picture. One of the sibs who had diabetes mellitus and optic atrophy in 1938[1] was reported 12 years later to have developed spinocerebellar degeneration, and 6 years later was noted to have developed deafness.

Gunn[10] et al in a study of 590 patients seen over a 16-year period in a Diabetes Clinic in Montreal reported 4 patients with optic atrophy, diabetes mellitus and hearing loss, two of whom had associated diabetes insipidus. Frequency of the syndrome among patients with juvenile diabetes mellitus appeared to be between 1/148 and 1/175 patients.

Progressive blindness in the absence of diabetic retinopathy associated with sensorineural deafness places the lesion outside the chiasmal region. Previously reported cases[11] of diabetes mellitus, optic atrophy, and craniopharyngioma were not associated with deafness. This demonstrates the importance of audiometry in patients presenting with diabetes mellitus and optic atrophy and the diagnostic and prognostic implications of recognizing this clinical entity.

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Dietary Goals—Dreams and Reality

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The attainment of a healthy life with freedom from debilitating disease is the old dream of humanity. It has been promised by many, but fulfillment has been elusive. Relative longevity is found in isolated areas of the world, often among those leading pastoral lives, but is not usually encountered in industrialized populations.

Epidemiological studies have shown that a component in the diet contributes to the development of atherosclerosis and heart disease. This is a causal relationship; it is not merely an association. Associations have been called risk factors and, too often, they are arrived at by circuitous manipulation of data. Unfortunately, these data are frequently interpreted to conform to the views of those with the power to grant money. In the Thirty Years War a motto was used: "Cuius regio, eius religio." Today one might paraphrase this: "Cuius pecunia, eius dieta,"

We are faced with recent findings that serum cholesterol levels may not have the previously thought deleterious effect on the degree of atherosclerosis, if the cholesterol is present as a high density lipoprotein.[1] This single novel concept throws into confusion all the previous conclusions regarding cholesterol-associated disease, because only total serum cholesterol was determined, and no partition studies were undertaken.

The United States Senate Select Committee on Nutrition and Human Needs has published dietary goals for all Americans.[2] Much of the data base of this report was derived from the Framingham Study, which was sponsored and has been maintained by the National Institutes of Health. It is worthwhile to evaluate the data from this study; if the data were found to be defective, the entire structure of conclusions based on these findings would become untrustworthy. Supposedly, a free-living population cohort was observed for the incidence of disease with no medical interference from the observer, which did not rule out treatment by other physicians for such chronic diseases as hypertension and diabetes mellitus. The treated cohort should have been separated from the untreated. This was not done.

We are told by the Framingham statistician, "We do not pretend that the Framingham data are definitive; they simply provide another set of facts to consider."[3] This humble acknowledgment does not contribute much to our confidence in the *Coronary Risk Handbook* material issued by the American Heart Association and which is also based on the Framingham results. Incidentally, this handbook is appended to the report of the Hearings of the United States Select Committee on Nutrition and Human Needs.[4]

In scientific circles it is expected that reproducibility of results is respectable and inspires confidence. Inferences drawn from such studies should reflect on intelligent analysis of the raw data and should be reached with the assurance that all contributing facts are reported as observed. After all, a *fact*, by definition, is a quality or a relation, the reality of which is manifest in experience or even inferred with certainty. On the other hand, *data*, by definition, constitute something on which an inference or an argument is based or from which an intellectual system of any sort is constructed. It appears that the NIH scientists, mentors of the Framingham group, employed the terms "fact" and "data" interchangeably. When data are presented as facts, and when conclusions are drawn from these so-called facts, the almost inevitable aftermath is a necessity to retreat from the hoary dogmas spawned by such misplaced trust.

Who can trust Framingham Study published results which do not contain the statistical conclusion that a population which never smoked had a

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mortality rate equal to that of the group which did smoke, and that the ex-smoker cohort had a considerably lower mortality? These findings might indicate that it is wise to start smoking, then stop, and thus live longer.[3]

Who can trust statistics based on Framingham investigators' claims of definite absence of atherosclerosis among recruited subjects, when those subjects included 258 males over 55 years of age? The study maintains that the subjects were free of coronary heart disease, because they exhibited no symptoms of the disease. This is both preposterous and deceptive. Even now, 30 years later, the medical profession is still attempting to discover presence of atherosclerosis and coronary heart disease in asymptomatic patients, and with no notable success, it might be added.[5]

Who can trust a study which claims that no treatment was given to hypertensive subjects and which later admits that 10 percent of such cases received antihypertensive therapy from the patients' personal physicians? This revelation appeared recently in an article that rebutted the argument that thiazides do not tend to increase serum cholesterol levels.[6] This fact alone disputes the claim of non-medical intervention in the observed group. Surely the course of the disease must have been altered by the therapy, and flawed statistics resulted from the lack of discrimination between treated and untreated hypertensives.

Who can trust the results of the Framingham Study which makes dietary recommendations in the absence of a report of a detailed investigation of the diets of individual subjects with which to back up those dietary recommendations? The high mean cholesterol level of some of the studied subjects was due to some unknown damage, but it surely was not shown that a dietary excess of fats and cholesterol was the unknown culprit, since all participants ate similar diets. Furthermore, a more recent investigation of the lipid metabolism of 60,000 Americans has found a lower average serum cholesterol level than had been previously thought to exist.[7] Only a theoretician completely removed from an understanding of biological realities can seriously state that a 10 percent reduction of serum cholesterol levels in the population of the United States is estimated to yield a 24.4 percent decrease in coronary heart disease incidence, and that a 50 percent reduction in serum cholesterol will yield an 84.2 percent decrease. Such an impossible undertaking would result in death from the stringent cholesterol-lowering measures themselves, rather than from heart disease. This preposterous calculation is found in another publication quoted as source material in the Senate's Dietary Goals report.[8]

I offer the caveat that spurious and manipulated calculations of risk factor combinations should not carry the weight of finality. Premature entrenchment of questionable dogmas impedes the progress of research toward scientific truth. The ever-increasing cost of health care can ill afford the added burden of the extravagance of unproven recommendations.

On February 1 and 2, 1977, the Select Committee on Nutrition and Human Needs held hearings on diets related to "killer" diseases and proclaimed dietary goals and recommendations based on the information presented at these hearings.[9] Regarding these goals and recommendations, I am in firm agreement with the American Medical Association which protested, in April, 1977, the setting of dietary goals for all Americans. It has implied that these goals are not the concern of a basically healthy population.[10] There is no argument against the need for individualized diets recommended by physicians for diseased patients. However, to undertake a diet change in well people to prevent the onset of an illness demands a foreknowledge that the recommendations will accomplish their intended purpose. Unfortunately, this knowledge is sadly lacking at present, as admitted by the Committee's own witnesses.[9]

I quote from the text of the hearings:

Page 12, Dr. Robert L. Levy, Director of the National Heart, Lung, and Blood Institute:

> "Where the doubt exists is the question of whether lowering cholesterol will result in a reduced incidence of heart attack: that is still presumptive."[9]

Page 319, Dr. Antonio M. Gotto:

> "Will diet or serum lipid lowering prevent coronary heart disease? More than a dozen major dietary studies have been carried out to determine whether or not reduction of serum lipid with diet will reduce the risk of developing coronary heart disease. . . . Many of these have been secondary studies; that is, they have been carried out in patients who already had had one or more heart attacks. Unfortunately, the results have been conflicting. About half of the studies describe a beneficial effect while the others have described little or no effect of dietary reduction of serum lipids. We are still faced with answering the question as to whether or not it is possible to protect people against a risk of coronary heart disease by lowering blood cholesterol, whether by diet and/or medication. Showing that the person has an increased risk of an early heart attack because of having a high level of blood cholesterol is not equivalent to saying that the risk is eliminated if the patient's cholesterol elevation is corrected. . . . The amount of cholesterol lowering obtained in the general population through administration of the diet recommended by the American Heart Association is approximately 10%. I cannot predict at this time the magnitude of the reduction of coronary heart disease from this degree of cholesterol reduction."[9]

In other words, there is doubt expressed by the witnesses that dietary measures will be successful in preventing manifestations of atherosclerosis in diseased persons, let alone in a so-called healthy population. To recommend such cholesterol-lowering diets with no sound, positive evidence is the equivalent of a flim-flam perpetrated on the United States Senate and on the American people.

One wonders why no mention is made in the entire hearing about the British "Report of the Advisory Committee on Medical Aspects of Food Policy on Diet in Relation to Cardiovascular and Cerebrovascular Disease (1974)."[11] This Committee reported:

> "A rise in the ratio of polyunsaturated to saturated fatty acids in the diet of an individual or of a group of people may be followed by a reduction in the mean serum cholesterol concentration. Nevertheless, the Panel are unanimous in remaining unconvinced by the available evidence that the incidence of ischaemic heart disease in the United Kingdom, or the death rate from it, would be reduced in consequence of a rise in the ratio of polyunsaturated to saturated fatty acids in the national diet. In the present state of knowledge, any suggestion or claim to that effect, with respect to the nation or an individual, would be unjustified."[11]

The Food and Drug Administration requires that serum cholesterol-lowering drug advertisements include a warning. "It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question."

Nobel Prizewinner Arthur Kornberg has described the situation rather succinctly: "People and politicians see current problems and want quick solutions . . . . There is an irresistible urge to gamble on a quick payoff."

One would expect the American Heart Association to be an open-minded, unprejudiced scientific body that would scrap any dietary advice they have given to the American people over the years, if it were shown to be incorrect. This organization's funds depend on the generosity of the American public and its expressed desire for a healthy life. However, like many other institutions, it has become instilled with the philosophy, "right or wrong, my association," and will not budge from the stand taken in its pamphlets, cookbook, media jingles, and its teachings of dieticians confused by new approaches. Instead of a science-promoting society, it is in danger of becoming a religion of anti-cholesterolers, who continue to censor opinions different from their own.

A similar accusation can be leveled at certain branches of the NIH, which recommended polyunsaturated fatty acids and egg substitutes with no proven dietary association to high or low density lipoproteins. They have arrived at an impasse and now look to the United States Senate for official sanction of the moneys granted for untested schemes. They have found an ally in the staff of the Senate Select Committee which has paraded witnesses representing but one side of the problem before the Senators, and these so-called experts were permitted to air their unproven theories without rebuttal.

The absurdity of the Select Committee's dietary recommendations is demonstrated by the absence of any mention of alcohol as an ingredient of American nutrition. Alcohol is a major dietary contributor to the morbidity and mortality of Americans, and the Committee's avoidance of recommendations on alcohol consumption shows a shocking void in the formulation of the dietary goals.

Serum cholesterol, either high or low, is not considered a risk factor in individuals over 55 years old. Therefore, the dietary limitation of consuming shell eggs by this large population group is a nutritional humbug. The older American will be deprived of a nutritious food by unsubstantiated dogma without scientific rationale.[12] Before we refrain from eating meat, eggs, and dairy products, we must be reasonably certain that the proposed substitutes are wholesome, equally nutritious, and not potentially harmful in the long term. A trial period of at least one or two generations would be required for this judgment to be made.

Considering the aforementioned shortcomings of the dietary goals, the Connecticut Advisory Committee on Foods and Drugs passed the following resolution:

> "The Connecticut Advisory Committee on Foods and Drugs feels there is not enough knowledge available on either of the opposing aspects of the issue to form a basis for the evaluation of the acceptability, for all American people, of the dietary goals proposed in the report of the United States Senate Select Committee on Nutrition and Human Needs."

In a logical scrutiny of the presented facts, an unbiased observer will conclude that, despite vast amounts of money and years of research, the concept that lowering serum cholesterol by diet or drugs will reduce coronary heart disease morbidity and mortality is still unresolved. Therefore, recommendations for dietary changes in the entire American population based on this concept should be rejected, at least for the present, as premature, wishful dreams of overzealous men.

Let us stop the politics of research money and start the policy of research maturity without preconceived ideas and ideological basis. Only then can we realize the dream of dietary goals for all Americans.

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ADDENDUM

Since this address was delivered in August, 1977, a revised second edition of "Dietary Goals for the United States" has been issued. Also, additional criticism has appeared in the literature which confirms the author's opinion and points of view.

American Medical News, January 9, 1978, states in an editorial entitled, "Muddled Menu":

> " . . . It is not appropriate for the government to adopt goals that specify such matters as the amount and proportions of total fat, sugar, cholesterol or salt in the diet of Americans. It is not realistic, given the nation's great cultural and genetic diversity, to expect universal adoption of such a rigid policy. . . . The AMA recommended that the report not be adopted."

In an article in the February, 1978 issue of *American Journal of Clinical Nutrition*, entitled, "Dietary Goals—A Skeptical View," Dr. A.E. Harper writes:

> " . . . There is evidence that people are less confident about their knowledge of nutrition today than they were a few years ago, undoubtedly because of the difficulty they have in distinguishing between the sense and the nonsense written about the subject. The worst of the misinformation, and the most widely read and quoted, does not come mainly from magazine and television advertising of food products as the Senate Select Committee concludes. It comes from food supplement promoters, from authors who earn a living by selling sensational nutrition misinformation and from a wide variety of pseudonutrition experts.
>
> "The Senate Select Committee might have addressed itself to this problem and investigated the sources of misinformation fully.
>
> "A federally-supported nutrition education program based on established knowledge that would help to teach people what sound nutrition practices are *and more particularly what can, and what cannot, be expected from following such practices*, would be of infinitely more value to the general public than a set of recommendations for nutritional treatment of chronic diseases based on fear of food and fear for health and proposed on the basis of highly selected information under the guise of dietary goals."

Radiologic Investigation of Hepatic Metastasis

BRUCE D. SIMONDS, M.D.

The early detection of hepatic metastasis is of great clinical importance, and recent advances in ultrasound, computed tomography, and nuclear medicine have focused attention of the relative utility of these imaging methods. The radionuclide examination has been the established method for determining the presence of hepatic metastasis with an overall accuracy in the early 1960's reported between 72 and 90%,[1] with more recent work using advanced instrumentation and tomographic scanning producing an accuracy of 87.5%.[2] Its most serious drawback is the significant number of equivocal and false positive results. Because of this limitation, recent interest has been directed toward other imaging methods in the hope of improving sensitivity and specificity of detecting local space-occupying lesions of the liver.[1 3 4] Proponents of each of the various methods have made claims which have confused the clinical decision-making process which determines which examination or combination of examinations offers the greatest diagnostic yield at the least cost.

Isotope examination of the liver using labelled colloid depends on the functional activity of the hepatic reticular endothelium which is uniformly distributed throughout the liver. "Cold" areas may be due to space-occupying lesions or abnormal function secondary to diffuse infiltrative disease such as hepatitis, fatty infiltration, and cirrhosis. Anatomic variations such as a large gallbladder fossa, prominent portal area or interlobar fissure, or thinning of a lobe may lead to equivocal or false positive results.[3 4 5] A resolution limitation of about 2 cm makes difficult the detection of small, deep lesions, though the recent development of tomographic nuclear scanners and respiratory correction devices have offered some improvement in resolution.[2 6]

The introduction of gray-scale ultrasound equipment with its improved resolution and tissue differentiation when used in combination with the nuclear scan, has improved the sensitivity and specificity of the metastatic search.[3 4 5 7] Ultrasound has been especially useful in differentiating anatomic variants of the liver such as an enlarged gallbladder fossa and thinning of a portion of the liver, particularly the left lobe.[3 4 5]

Defects of the porta hepatis are often due to anatomic variation,[8] and ultrasound has been especially accurate in differentiating the normal from metastic disease and extrinsic masses.[8 9] In jaundiced patients an unusually high number of equivocal nuclear scans have been reported, and ultrasound has been accurate in differentiating those secondary to metastasis from those patients with obstructive jaundice due to extrinsic lesions.[1]

In a recent prospective study, ultrasound improved the diagnostic yield of equivocal hepatic scintiscans.[5] In a group of "indeterminate readings" of nuclear scans, ultrasound was 94% accurate in differentiating normal from abnormal. In the group of "probably abnormal" nuclear scans, many false positive readings resulted in an accuracy of only 47%. Ultrasound exam was 91% accurate in this latter group.[5] Although ultrasound greatly improved the diagnostic yield in equivocal scans, scintigraphy was found to be more sensitive than ultrasound, 89% versus 83%.[5]

Definitely positive defects in the liver scintiscan may be due to cysts, abscesses, or metastatic disease, and differentiation is crucial to patient management. The unique properties of ultrasound permit accurate differentiation of solid and cystic lesions. Ultrasound is successfully applied as a complementary exam in distinguishing metastasis from simple cysts, polycystic disease, and abscesses, approaching an accuracy of 90%.[1] Confirmation of a single defect in a liver scintiscan by ultrasound is especially important as illustrated in the following case of a patient with a known hypernephroma. In the workup for metastatic disease a single focal defect was demonstrated at scintigraphy (Figure 1). Ultrasound (Figure 2) demonstrated the lesion to be a simple liver cyst within an otherwise normal liver, considerably altering patient management.

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Figure 1
Anterior view of liver scintiscan shows a defect in the anterosuperior portion of the right lobe of the liver in a patient with a known hypernephroma. The organ flow study also showed a defect in this region.

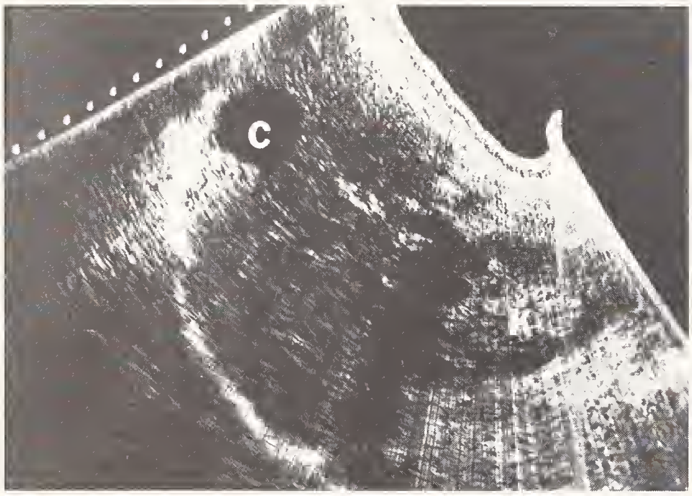

Figure 2
Right parasagittal echographic section demonstrates a cyst (C) in the anterosuperior portion of the right lobe of the liver corresponding to the scintigraphic defect. Also noted is a sagittal section of the kidney (K).

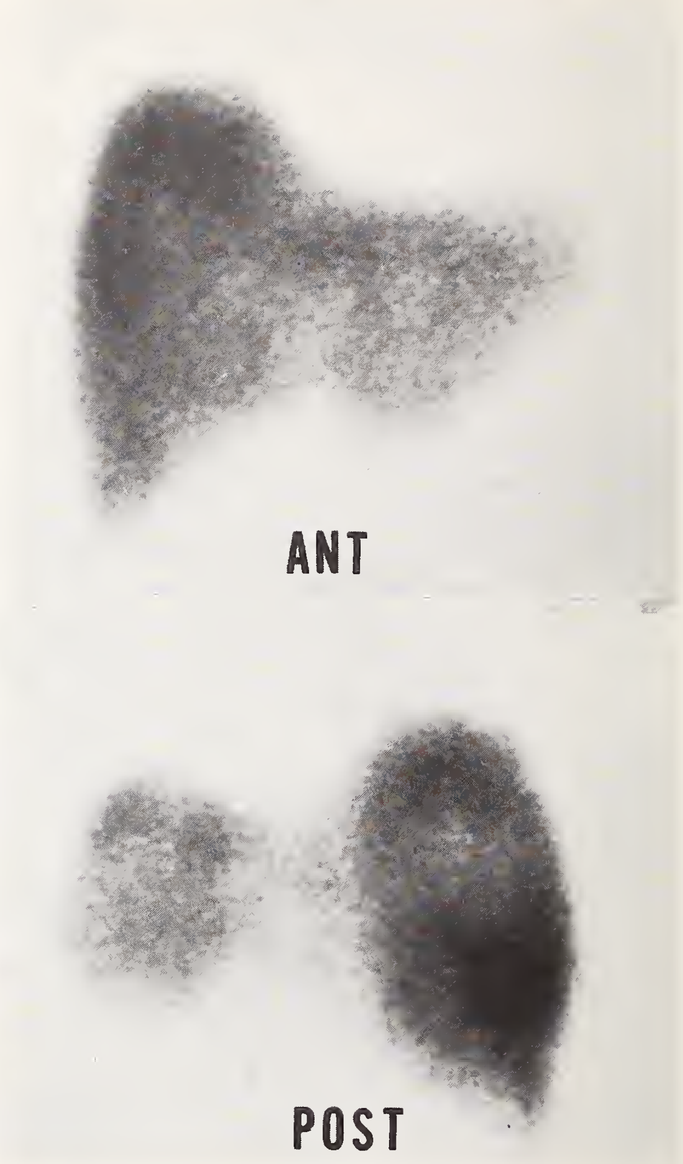

Figure 3
Anterior and posterior views of the liver scintiscan demonstrate a large posterior defect in the right lobe liver best seen on the posterior projection.

However, ultrasound suffers from certain technical limitations caused by obesity, bowel gas, overlying ribs, and poor skin contact in patients with surgical scars, drains, or colostomies.[1, 5, 3] In these cases, the liver scintiscan is superior in demonstrating the entire liver. Moreover, considerable expertise is required to produce the images with ultrasound, and because it is a tomographic modality, it is difficult to be certain that the entire liver has been visualized.

Occasionally, diffuse metastatic lesions of the liver are difficult to detect by ultrasound.[3, 5] Figure 3 is of a patient with breast carcinoma in whom the liver scintiscan demonstrates a large, posterior defect in the right lobe, interpreted as probable metastatic disease. Ultrasound examination (Figure 4) reveals a large metastatic lesion posteriorly, and several smaller satellite lesions not seen at scintigraphy, demonstrating the superior resolution of ultrasound in detecting small, deep lesions. Clinical remission was obtained with chemotherapy for several months, but subsequently, with clinical deterioration, a repeat liver scan was performed (Figure 5), showing marked progression of metastatic disease. Ultrasound examination (Figure 6) was initially interpreted as improvement. Closer scrutiny revealed that the previously demonstrated focal metastatic lesions had changed in echographic character with chemotherapy and were replaced by diffuse hepatic involvement, causing confusion in the ultrasound interpretation. Although this is an uncommon occurrence, it demonstrates one of the limitations of ultrasound and emphasizes the complementary use of the two examinations.

Recent studies[3, 4] have compared the utility of computed tomographic scanning with ultrasound and radionuclide imaging. Computed tomography, like ultrasound, has provided clarification of anatomic variants, porta hepatis defects, and biliary anatomy.[3] In the most recent comparison[3] although ultrasound obtained the highest accuracy, because of its greater specificity, it was felt that the radionuclide study should continue as the initial screening examination. Grossman[3] found that the combination of nuclear imaging with its global liver visualization and ultrasound's superior resolution identified all lesions, whereas CT scanning alone or in combination with the other modalities failed to demonstrate all abnormal foci. However, these studies were carried out with first and second generation CT scanners, where motion artifacts and surgical clip artifacts degraded image quality. Additionally, metastatic lesions may be isodense with the normal liver tissue, and intravenous contrast material is often required to demonstrate space occupying lesions,[3] making CT scanning somewhat invasive. Disadvantages of CT scanning also include a significant radiation dose and high capital cost of equipment, resulting in twice the cost of examination compared to nuclear medicine and ultrasound. Further comparison studies, however, with faster third generation scanners may increase the accuracy and justify its use.

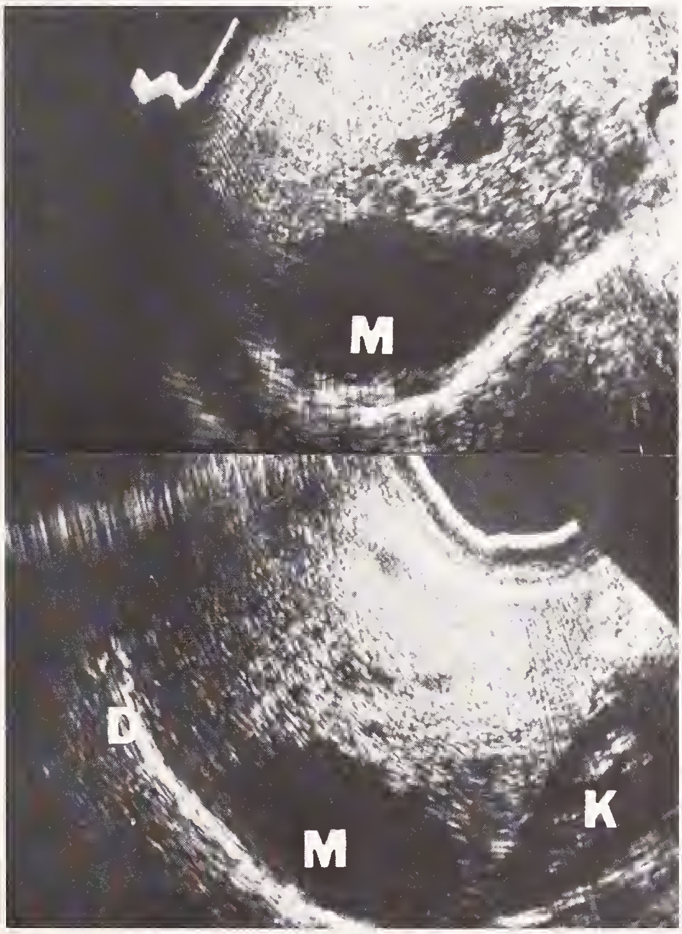

Figure 4
Transverse (above) and sagittal (below) echographic sections demonstrate a large solid mass (M) which is less echodense than the surrounding normal liver, typical of metastasis. Note also the smaller satellite lesions representing other metastases. The sagittal section (below) demonstrates the diaphragm (D) and the right kidney (K).

In conclusion, the following sequence of examinations appears most appropriate for the investigation of hepatic metastasis. The radionuclide scintiscan should be performed as the initial screening study since imaging is technically simple and provides a global view of the organ, unhindered by obesity, gas, or overlying ribs. Although the overall accuracy for ultrasound is higher than scintigraphy[3 5] because of the higher sensitivity of the radionuclide scintiscan, the predictability of an unequivocally normal liver scan is greater than ultrasound. Thus, the normal liver scan requires no further investigation. All equivocal liver scintiscans should be complemented by ultrasound to increase specificity, spearating anatomic variations from pathologic masses, thus decreasing the false positive rate of scintiscan interpretation. Additionally, ultrasound may be used to further characterize defects as cystic or solid, especially in the

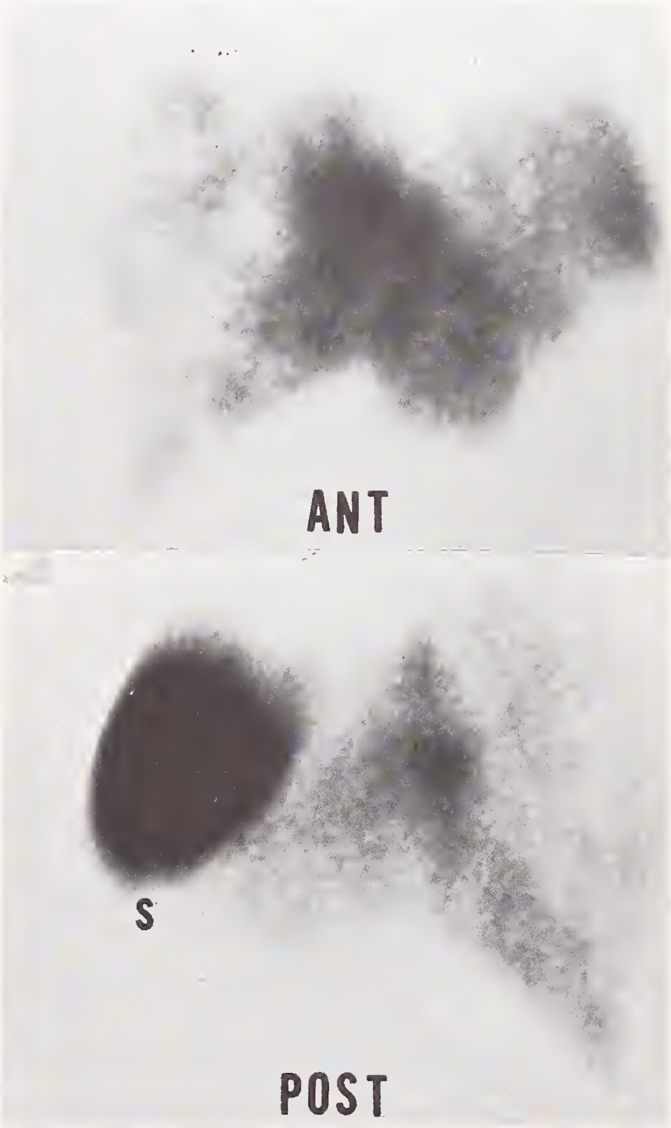

Figure 5
Anterior and posterior views of the liver scintiscan now demonstrate marked progression of metastatic disease with multiple "cold" areas. The posterior view, when compared to Figure 3, now shows a marked shift of the colloid to the spleen (S), indicating marked hepatic replacement and probable portal hypertension.

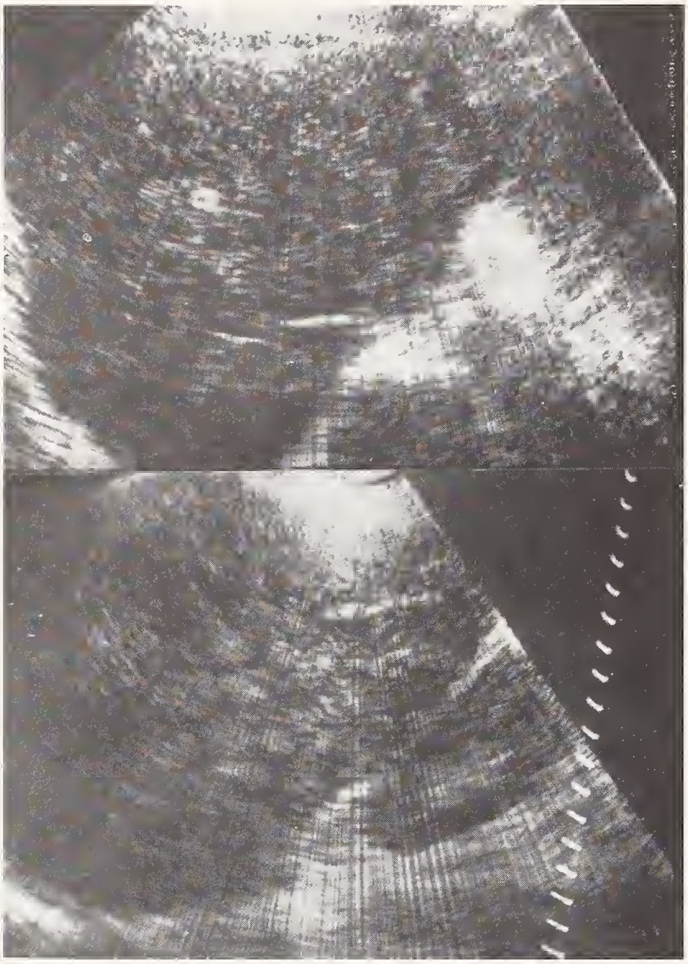

Figure 6
Transverse and sagittal echographic sections comparable to those in Figure 4 show the change in echographic character with now a diffuse replacement of the liver parenchyma indicated only by a slight heterogeneity of the normal internal echoes of the liver. Note the coarse, irregular liver echoes when compared to the fine, regular echoes in Figure 4.

case of an isolated defect at scintigraphy. In those patients where ultrasound is limited for technical reasons, CT scanning may be useful to further delineate suspected pathology.

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Jehovah's Witness Form Clears MDs

The physician's dilemma of what to do when a patient will not accept medical treatment because of religious beliefs has been resolved, at least in one instance, by a recent agreement between the AMA and Jehovah's Witnesses. A Jehovah's Witness who will not take blood transfusions, even if his life is in danger, should sign the following statement in the presence of a witness, preferably a spouse or relative: "I (We) request that no blood or blood derivatives be administered to [patient's name] during this hospitalization, notwithstanding that such treatment may be deemed necessary in the opinion of the attending physician or his assistants to preserve life or promote recovery. I (We) release the attending physician, his assistants, the hospital and its personnel from any responsibility whatever for any untoward results due to my (our) refusal to permit the use of blood or its derivatives." A parent can sign the form for a child, and has the right to refuse care for the child, unless a physician is prepared to attempt to remove the child from the parent's custody through legal action.—*Modern Medicine,* July-Aug., 1978

Genital Infections: Some Practical Guidelines

HANS H. NEUMANN, M.D.

Despite efforts to standardize recommendations, there are no final truths applicable to the management of genital infections. The realities of medical practice require adaptations to necessity and to practicability, thus procedures must, at times, differ from those found in textbooks or from those specified by research clinics. Some of the following rules constitute such compromises.

Diagnosis

In office practice, do not expect to determine the etiologic agent of all genital infections by laboratory methods. Bacteriological tests for many organisms such as those of nonspecific urethritis (NSU), herpes simplex, non-gonococcal PID, are not readily performed nor commonly available.

Do not rely on Gram smears from the vagina or the cervix. The profusion of bacteria makes a valid etiologic conclusion by this means almost impossible.

Some genital infections have to be treated empirically, using clinical judgment. Waiting for bacteriological clarification may spell discomfort and sometimes calamity for the patient. This applies to cases of vaginitis when neither trichomonas, monilia, gonococci nor other specific agents are identifiable. Many organisms are potentially involved and their relative significance is still debated inconclusively.

Treatment of male urethritis should not be delayed if lab results are not immediately available. It takes time to get culture results and a negative Gram smear does not rule out gonorrhea.

Attempts to differentiate gonorrhea from NSU by clinical impression are unreliable. The symptoms overlap, and they may be the same. However, it matters little since the treatment—at least initially—is the same for both types of urethritis. Eighty to ninety percent of urethritis cases in the male, seen in private offices, are non-gonococcal, though sexually transmitted.

In taking cultures for gonorrhea it is important that as soon as possible, and at most within an hour, the medium be put into a carbon dioxide atmosphere, such as a candle jar.

Do not look upon a lab slip with a negative report for gonorrhea from a cervical culture as though it were the Holy Grail. If an infection is indeed present, even under ideal conditions there may be a fifteen percent failure rate of growth, as evidenced by repeating cultures three times, once about the time of the menses. Such repetition is impractical and costly, particularly for purposes of screening.

Routine throat and rectal cultures are expensive compared to cervical cultures because fermentation tests are needed. Throat and rectal cultures are likely to be positive in about eight percent of the cases with gonococci isolated from the cervix. But in only one percent of women with positive throat or rectal cultures are cervical cultures negative.

With homosexual patients, it is advisable to take rectal cultures routinely.

If there is a remote possibility of a gonococcal infection, gloves should be changed between a vaginal and a rectal examination, otherwise a localized cervical infection may be transferred to the rectum by the examining physician—iatrogenic gonorrhea. Rectal gonorrhea is more resistant to treatment.

Treatment

Because of the lower risk of serious complications, oral treatment in office practice is preferrable to injected antibiotics.

To use 4.8 million units of penicillin I.M. in office practice, an infection must justify the risk, and resuscitation equipment must be at hand. Gonorrhea ordinarily does not justify it; it is too common an infection, and on a national scale mortality from anaphylaxis is higher than from gonorrhea.

In the treatment of venereal diseases, reserve penicillin for syphilis and for gonorrhea during pregnancies.

Use tetracyclines as first-line drugs in the office treatment of gonorrhea. This avoids anaphylaxis and procaine reactions, as well as post-gonococcal urethritis. At present, the dose is still 500 mg qid for 4½ days, for a total of 9 gm. This course may have to be repeated in cases of non-gonococcal urethritis. It is important to emphasize the need to take all the medication, regardless of symptomatic relief.

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In treating with tetracyclines, an initial loading dose is not needed. Theoretically, this antibiotic should be given between meals. Practically, in treating gonorrhea, it makes no difference and compliance appears to be better when recommended to be taken after meals.

If in cases of proven gonococcal infections there are doubts about patient compliance with oral medication, use Spectinomycin 2 gm I.M.. For the gay patient or if gonococcal proctitis is suspected, use 4 gm of Spectinomycin.

Use Spectinomycin in treatment failures but not as first-choice drug, since it does not affect NSU, post-gonococcal urethritis, or incubating syphilis. Tetracyclines do abort early spirochetal infections.

Do not use Erythromycin to treat gonorrhea, except for patients who are both pregnant and allergic to penicillin. Such cases have to remain under close observation for retesting because there is a 20-25 percent failure rate with Erythromycin.

In the delivery room, do not subdelegate to the most junior member of the team the putting of silver nitrate into the conjunctival sack of the newborn. To avoid failures, consider it an important procedure. Do not permit it to be followed by saline or water irrigation since this will reduce its effectiveness.

PID

Discourage patients from using douches perimenstrually, unless it is a gentle rinsing. The cervical canal is patent at that time and infectious material may be swept into the upper genital tract by the gushing floods. This may trigger salpingitis or PID, particularly if pathogens are present in the vagina. Most episodes of salpingitis begin within seven days of the onset of the previous menstrual period.

In diagnosing PID, clinical judgment is more important than lab findings. In differentiating it from appendicitis, ectopics, cysts, etc., do not forget that these may co-exist with gonorrhea.

Do not delay the signing of a premarital certificate if a serology report is positive. It may be due to a biologically false reaction, or to an old, treated infection. If there are doubts, perhaps concerning the adequacy of past treatment, inject 2.4 million units of long-acting penicillin and sign the certificate. This renders syphilis non-communicable and that is all the certificate demands.

Other Genital Infections

Do not treat an incidental lab report of trichomonas or of monilia. Treat trichomon*iasis* or monil*iasis*—in other words treat cases with symptoms or complaints by patient or sex partners. Both organisms are far too common to treat the asymptomatic harbinger of either.

Treat trichomoniasis with smaller doses of Flagyl than in the past. Fifteen of the 250 mg tablets, taken over a three-day period, are effective. An alternative is 5 tablets twice a day for a total of 10 tablets. Treat sex partners as well.

Do not expect to find lymphogranuloma venereum, granuloma inguinale, or chancroid in Connecticut office practice; they are exceedingly rare in this region. They respond to treatment courses with tetracyclines.

Salpingitis, whether gonococci are found or not, is often polymicrobial; chlamydiae trachomatis, mycoplasm and a multitude of other organisms may be involved.

PID can be treated on an office outpatient basis, except for the most acute or febrile cases. The great majority of them will, in three to four days, respond to tetracyclines, in doses as used for gonorrhea.

Expect a ten to fifteen percent rate of sterility after the first incident of salpingitis and a doubling of that rate in the probability of sterility, after each new episode of salpingitis.

Do not send bills home after treating a juvenile for VD and do not inform the parents. It is against the law to do so.

Syphilis

Look at syphilis and gonorrhea from a new perspective: From a physician's angle, syphilis, when treated early, has become the lesser of two evils. It responds promptly, the epidemiology is simpler because of its slow spread, and there are reliable diagnostic tests. Nowadays, complications are seen far more rarely with syphilis than with gonorrhea.

In treating scabies or crab lice be aware of the fact that the itch may outlast the infestation by many days. This should be taken into consideration, before re-treatment is advised. Gamma benzine hexachloride is effective, but sulphur in petrolatum is safer for small children and infants.

Do not treat venereal warts with 25% podophyllin if the area is large, or in pregnancies; its absorption and toxicity presents hazards. Under such circumstances use electrodessication or cryotherapy.

Prevention

Do not expect an effective gonorrhea vaccine. To date, no vaccines exist for infections in which the natural disease itself leaves no appreciable immunity.

As far as epidemiology is concerned, and in counselling youths, warn that the chances of acquiring VD are higher in sexual contacts with individuals of low education level. There is disproportionately more VD among the low socio-economic strata of the population. Another point in this respect: the bigger the urban area, the more VD per unit of population.

Statistically, the highest probability of middle-aged, middle-class patients acquiring VD is at conventions, on vacations, or on business trips.

Iatrogenic Liver Disease
INH Hepatitis

ROBERT SCHEIG, M.D.

Case Presentation

The patient was a 42-year-old white male admitted to another hospital 9/17/75 with jaundice and ascites.

Four months before admission the patient was started on isonicotinic acid hydrazide (INH) chemoprophylaxis, 300 mg once daily, because an intermediate strength PPD was 42 mm. He had been tested after his daughter was found to have a positive Tine test during a routine physical examination. Both patient and daughter had normal chest x-rays. After one month, the dosage was changed to 100 mg t.i.d. because of the development of anorexia and nausea. These symptoms continued, and, over the next two months, the patient also developed increasing malaise and fatigue. Two weeks before admission he saw his physician because of abdominal swelling. He was jaundiced and had ascites. Serum bilirubin was 29 mg/dl, SGOT 1200. INH was stopped, but the symptoms continued.

The patient had no previous history of liver disease, no known exposure to hepatitis and had been on no medications other than INH. He had no exposure to hepatotoxins. He drank six bottles of beer daily. Past medical history was unremarkable.

On admission he was alert, oriented, icteric. Spider angiomata were noted on the upper chest and back. The liver span was 20 cm., the edge smooth and non-tender. The spleen was not felt. The abdomen was distended and shifting dullness was present. There was no peripheral edema. Neurological examination was negative.

Laboratory study revealed normal CBC and electrolytes, bilirubin 27.2 mg/dl with 20.6 mg/dl direct, SGOT 197, SGPT 190, alkaline phosphatase 105, albumin 3.2 gm/dl and globulins 3.1 gm/dl. Prothrombin time was 20.5 seconds. HBsAg was negative.

The patient was begun on 15 mg prednisone q 6 h. On the second hospital day he became disoriented and developed asterixis. Neomycin per os was begun. He required five units of blood on the fourth hospital day because of an acute upper gastrointestinal bleed. Endoscopy showed esophageal and gastric varices. However, the bleeding sites were three superficial duodenal ulcers. Renal function deteriorated and by the ninth hospital day BUN was 136 mg/dl and creatinine 5.8 mg/dl. Peritoneal and then hemodialysis lowered BUN but did not improve mental status. Over the next five days the BUN again rose to 180 despite adequate urine output and aggressive hydration. At this time the liver was only 14 cm., bilirubin was 34.4 mg/dl, but SGOT was 18 and SGPT 22. On the 21st hospital day the patient had a second major upper gastrointestinal bleed. On the 24th hospital day, during peritoneal dialysis, he developed hypotension unresponsive to fluid replacement, a tachyarrhythmia and he died. No postmortem examination was obtained.

Discussion of Case

Dr. Robert Scheig: I would like to divide the discussion of today's Grand Rounds into four parts. First, we should look at the spectrum of liver damage that can result from adverse reactions to drugs. Second, we must learn of those changes in "liver function tests" that occur during drug ingestion that do not appear to be due to the development of liver disease. Third, it will be useful to divide adverse drug reactions as they relate to the liver into two categories—toxic reactions and hypersensitivity reactions. Finally, I would like to place the case under discussion today into the context of toxic hepatitis and outline why this patient should not have died.

Pathological Changes in Liver due to Adverse Drug Reactions

Table I lists in the left-hand column some of the pathological changes that have been attributed to an adverse drug reaction. Representative chemicals that have been associated with the development of these pathological changes are shown in the right-hand column. This list is not meant to be complete, and it should be noted that any one drug may cause a number of different pathological changes. A few specific comments will place these disorders in some perspective. While cholestasis usually resolves upon cessation of drug therapy, cases have been described in which the

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ROBERT SCHEIG, M.D., Professor of Medicine, Head, Division of Gastroenterology, University of Connecticut School of Medicine.

Presented in Farmington on August 3, 1977.

Table I
SPECTRUM OF LIVER INJURY FROM DRUGS

Pathology	*Drug*
Cholestatis	Chlorpromazine Methyl testosterone Erythromycin estolate
Viral hepatitis-like	INH
Chronic Active Liver Disease	α Methyldopa Aspirin
Fulminant hepatitis with bridging necrosis	Halothane
Postnecrotic cirrhosis	Methotrexate
Biliary cirrhosis	Chlorpromazine Methyl testosterone
Fatty infiltration	Tetracycline
Granulomatoid	Sulfonamides Dilantin Quinidine
Budd-Chiari syndrome	Contraceptive steroids
Porta vein thrombosis	Contraceptive steroids
Adenoma	Contraceptive steroids
Peliosis hepatis	Anabolic steroids
Carcinoma	Anabolic steroids
Angiosarcoma	Fowlers solution

course was protracted, pruritus was intolerable and primary biliary cirrhosis the eventual outcome. From an economic standpoint, perhaps the worst aspect of cholestatic drug reactions is that they entirely mimic extrahepatic biliary obstruction. Frequently, therefore, patients must be subjected to "skinny needle" cholangiography, endoscopic retrograde cholangiopancreatography or even exploratory laparotomy, with the morbidity and mortality attendant on those procedures, in order to resolve the issue.

Many drugs will produce a disease which completely mimics viral hepatitis both clinically and pathologically. Some drugs may cause the pathological picture of bridging necrosis (subacute hepatic necrosis). This may be associated with a clinical picture of fulminant hepatitis or chronic active liver disease. The drugs in current use which most commonly cause this are α-methyldopa, INH, Halothane, and, in patients with collagen vascular disease, aspirin. While some patients may ultimately develop clinical remission of their disease, others may go on to develop postnecrotic cirrhosis with all its attendant complications.

Drugs such as methotrexate may cause postnecrotic cirrhosis without the patient's developing any symptoms or alterations in liver function tests.

Many drugs cause fatty infiltration of the liver. Since the fat will cause alterations in liver function, many other diseases may be simulated and a liver biopsy may be required to establish the diagnosis. Unusually, large doses of tetracycline may produce fatty infiltration of the liver associated with a clinical syndrome not dissimilar to the Reye syndrome, and several fatalities have been recorded. Women with pyelonephritis seem unusually susceptible.

Granulomas are frequently seen in drug reactions. Since the associated liver function abnormalities are rises in bilirubin and alkaline phosphatase with only modest rises in transaminases, extrahepatic biliary tract disease may be simulated.

It is now established that chronic estrogen ingestion increases the incidence of venous thrombosis, and the hepatic and portal veins are no exceptions. Estrogens, especially mestranol, seem to have increased the incidence of spontaneous bleeding from hepatic adenomas and may have increased the incidence of these adenomas as well. Peliosis hepatis (literally, black and blue liver due to the presence of blood-filled cysts) is a rare complication of C-17 alpha alkyl substituted anabolic steroids. These agents have also been implicated in the development of hepatomas in patients treated long term for Fanconi's anemia.

Drug-Induced Abnormalities in "Liver Function Tests" not Related to Hepatotoxicity

Before attributing abnormalities of those tests used to assess hepatic function to the development of liver disease, one must evaluate the possibilities that drugs may produce changes in those tests by a variety of mechanisms without producing alterations in hepatic structure. Some examples are shown in Table II. The drug under discussion today, INH, frequently will produce elevated levels of SGOT. In one study, 12% of 85 tuberculin-positive patients given chemoprophylaxis with INH because of tuberculin positivity developed SGOT levels over 100 mU/ml.[1] These elevations were seen in the first three months of therapy and promptly declined on stopping the drug. In another study 38.2% of 173 patients completing at least 24 weeks of chemoprophylaxis had at least one SGOT over 30 mU/ml, the upper limit of normal.[2] Most abnormalities occurred within 12 weeks and usually disappeared even though the drug was continued. None went on to hepatitis. However, some patients had elevations in serum bilirubin suggesting toxic liver injury. Indeed, five patients have been biopsied whose transaminases fell upon withdrawing INH and all showed some hepatocellular damage even though there was no clinical evidence of hepatitis.[3] INH therapy was later resumed in these patients without a subsequent transaminase elevation. These changes in transaminase may be evidence of subclinical drug toxicity, but alternate explanations seem more likely since they disappear with continued drug use. Erythromycin causes false elevations in transaminase due to the presence of an unidentified substance in the blood related to administration of the drug. Intramuscular injections may cause muscle damage with release of the transaminase from the muscle cell into the circulation. This can be confirmed by obtaining creatine phosphokinase levels which rise with muscle damage. Phenobarbital probably causes increases in serum alkaline phosphatase in some cases by increasing its

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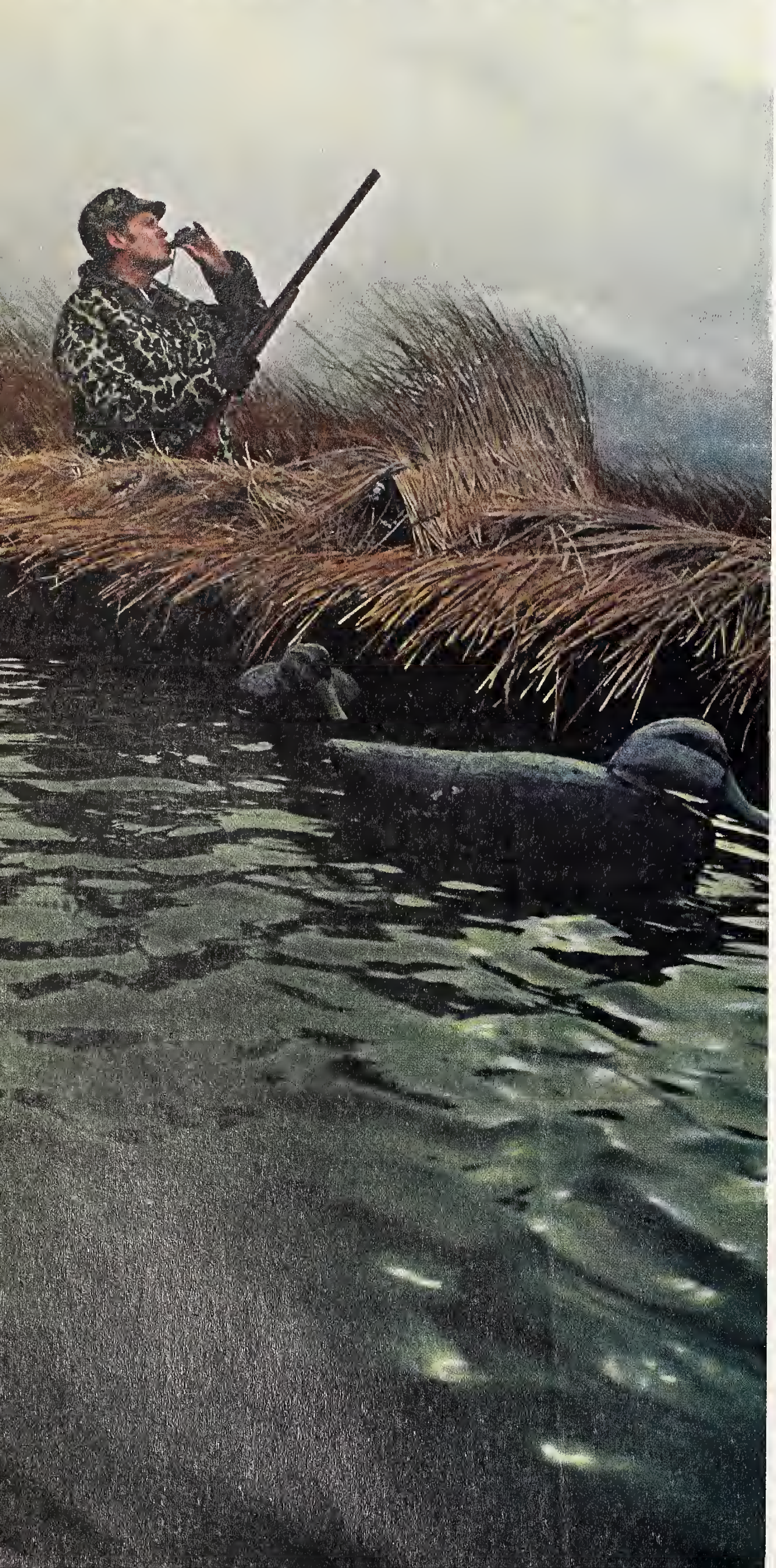

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Table II
DRUG-INDUCED ABNORMALITIES IN "LIVER FUNCTION TESTS" NOT RELATED TO HEPATOTOXICITY

Test	*Drug*
SGOT	INH Erythromycin Intramuscular injection
Alkaline phosphatase	Phenobarbital
BSP	Gallbladder dye Rifampin
Bilirubin	Rifampin Novobiocin
Liver Scan	Clofibrate

hepatic synthesis. Rifampin and gallbladder dyes compete with BSP for the same hepatic transport mechanism. Novobiocin inhibits glucuronyl transferase and interferes with the excretion of bilirubin from the liver cell, while rifampin may compete with bilirubin for both uptake by and excretion from the liver cell. Liver scans, which measure distribution of reticuloendothelial function in the liver, may be diffusely abnormal in patients taking clofibrate.

Drug Hepatitis—Toxic and Hypersensitivity Reactions

Classically, a hepatotoxin is a chemical (drug) which produces liver injury within hours of exposure. The amount of injury is dose-related. Not only are all individuals susceptible but the lesion can be reproduced in a wide variety of experimental animals. Finally, the pathological lesion is usually quite characteristic for any given chemical. In sharp contrast, hypersensitivity reactions, often called drug hepatitis, are caused by chemicals (drugs) which produce liver injury only after a long latent period. Authentic drug reactions have occurred three weeks following cessation of drug therapy. There is no dose relationship. Only a small fraction of individuals appear to be susceptible to this type of hypersensitivity reaction. Most drug reactions have an incidence which is less often than 1 in 10,000 cases. If a drug causes a serious reaction in 1:100, it is usually removed from the market. No experimental animal has been found which is susceptible to a hypersensitivity hepatitis. This presents a serious problem to the clinician when new drugs are introduced, since insufficient numbers of humans have been given the drug to ascertain whether adverse reactions might occur. Since adverse drug reactions can mimic so many other disorders (Table I), especially viral hepatitis, one can easily appreciate why drugs may be on the market for many years before it is recognized that they are the cause of liver disease. Finally, it must be noted that the pathological changes produced in this form of liver injury are not characteristic, and may mimic cholestasis, viral hepatitis with or without bridging necrosis, granulomatous reactions, etc. Moreover, any one drug may be associated with several different pathological changes. Thus, by and large, a drug must be on the market for some time, often many years, before hypersensitivity reactions to it become recognized. In contrast, drug brochures can usually state right off if a drug is an hepatotoxin because toxicity will have been studied in experimental animals. As we will see in the next section, an exception to this generality may occur when not the drug but the metabolic product of the drug is the toxin. INH hepatitis has become the classic example of this form of toxic hepatitis.

INH Hepatitis

INH was introduced into clinical medicine in 1952. Although there had been sporadic reports that it might occasionally cause liver injury, it was not until 1972 that INH hepatitis became an established clinical entity.[4] Since then, work done on experimental animals has established the hepatotoxicity of INH.

Cell injury and cell death following toxic liver injury is now felt to be due to covalent binding of toxins or toxic metabolites to plasma cell membranes, mitochondrial membranes or endoplasmic reticulum membranes of the hepatocyte.[5] Evidence for this includes the finding that covalent binding to macromolecules occurs at sites of hepatic necrosis. The amount of covalent binding parallels the amount of necrosis.

Figure I shows the metabolism of isoniazid. It should be noted that INH is first acetylated to acetylisoniazid which is then hydrolyzed to isonicotinic acid and acetylhydrazine. Acetylhydrazine, after

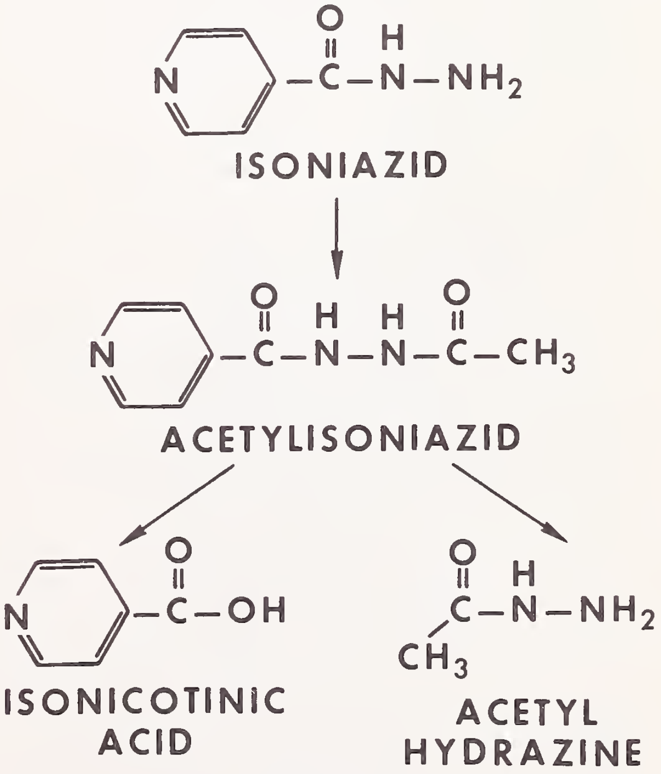

Figure 1
Isoniazid Metabolism

metabolic activation involving the cytochrome P-450 mixed-function oxidases, may become covalently bound to cell macromolecules.[6]

Single doses of isoniazid to rats produce no detectable liver damage. Single doses of acetylisoniazid, however, produce single cell necrosis. Phenobarbital is known to increase the level of the cytochrome P-450 drug metabolizing enzymes. Phenobarbital pretreatment greatly potentiates the amount of necrosis produced by acetylisoniazid while cobaltous chloride treatment, known to inhibit the synthesis of the cytochrome P-450 drug metabolizing enzymes, prevents the necrosis due to acetylisoniazid. Effects of acetylhydrazine were even greater than those of acetylisoniazid, probably because it has been shown that acetylhydrazine binds covalently ten times more readily. The reason for the lack of isoniazide toxicity in the rat is because very little is hydrolyzed, presumably due to rapid acetylisoniazide excretion. It is noteworthy that acetylisoniazid and acetylhydrazine toxicity is less in protein deficient animals, presumably because of a lower concentration of drug metabolizing enzymes. Para-amino salicyclic acid (PAS) inhibits acetylation which may explain in part the apparent lower human hepatotoxicity to INH in those patients also receiving PAS. Finally, necrosis from acetylisoniazid is prevented by a chemical, bisparanitrophenyl phosphate, which inhibits the hydrolysis of acetylisoniazid.

Turning now to findings in humans, Garibaldi found that 19 of 2,321 patients who were under surveillance by the United States Public Health Service while receiving INH chemoprophylaxis developed hepatitis (0.82%) and 2 of the 19 died (10.5%).[4] Stemming from that report, Black et al.[7] surveyed 13,838 patients given 300 mg. INH daily. Of these, 48% completed 12 months of treatment. Hepatitis developed in 114 (0.82%) of the 13,838 and 13 of these died (12.3%). All who died had bridging necrosis with or without multilobular collapse. Twenty other individuals with INH hepatitis had liver biopsies and 16 had a nonspecific hepatitis, 3 chronic active liver disease and 1 had cirrhosis. Of great practical importance was the observation that 55% of all patients with hepatitis presented with digestive complaints, 35% with a viral-like illness and only 10% with jaundice. The onset of the disease was during the first month of therapy in 15% and during the second month in 31%. Thus, almost half of the cases occurred in the first two months of therapy and rarely did a case occur after 8 months of treatment. The outcome was more often fatal if the onset was greater than 2 months after INH was started and if bilirubin levels were over 20 mg/dl. Nine of the 13 deaths were in black females. Subsequent studies have shown that the longer the symptomatic interval during which isoniazid is continued, the greater is the chance of having bridging necrosis and a fatal outcome.[8] Indeed, fatalities appear to be rare if the drug is stopped within two weeks of the onset of symptoms.

Since no correlation has been found between INH plasma concentration and susceptibility to liver injury one needs to ask why some, but not others, develop this complication of therapy. One would anticipate from the animal experiments that anything which would increase the formation of toxic metabolites might result in a greater incidence of liver injury. It had been noted in the United States Public Health Service trial that Orientals were more susceptible to the injurious effects of INH than other racial groups. At least 90% of Orientals are genetically rapid acetylators of INH and so would produce high concentrations of acetylisoniazid which could be metabolized to acetylhydrazine. In contrast, 45% of black or white Americans are rapid acetylators. In a study of 26 non-Oriental patients with INH hepatitis it was observed that 86% were rapid acetylators instead of the anticipated 45%.[9] One might also predict that anything that increased acetylation rate in non-rapid acetylators might increase the chance of developing INH hepatitis. Such an observation has been made in the case of patients treated with INH and rifampin.

Pessayre et al.[10] described 6 cases of fulminant hepatitis in patients treated with INH and rifampin. In 4 of the cases treatment had been started within 3 days of surgery when many drugs such as halothane, barbiturates and meprobamate had been employed. Thus, these patients had been given drugs known to be inducers of drug metabolizing enzyme synthesis. Rifampin is also an inducer. The time interval between the beginning of INH-rifampin therapy and the development of hepatitis was only 6-10 days, much shorter than the period seen when INH alone is given. From the data in the literature, the incidence of hepatitis when INH is given along with rifampin is 5-8%, and more cases occur during the first month of therapy than any other time. In contrast, the incidence of hepatitis with INH alone is 0.8% with peak frequency during the second month. It is tempting to speculate that other inducers of the synthesis of drug metabolizing enzymes may also be involved with the incidence and time of onset of INH hepatitis. Our patient today was taking such an inducer, ethanol, in his daily six pack.

Conclusion

At the onset we stated that this patient should be alive today. In the first place he should not have received INH. Five years of observation of over a million U.S. Navy recruits with positive tuberculins and normal chest x-rays reveal that the annual incidence of tuberculosis was less than 0.08%.[11] Thus, the number of deaths from INH therapy are equal to the number of cases of tuberculosis that would become active in the first year without therapy. Today, of course, very few of these reactivated cases would prove to be fatal. Even if INH had been given, all the clinical data point to the fact that recovery occurs if the drug is stopped within 2 weeks of developing symptoms. This did not occur in the present case. Since GI complaints are the most frequent presenting symptoms, all patients in INH should be instructed to promptly consult a physician if GI or viral-like complaints are present for more than a day or two. If in doubt, a serum transaminase level should resolve the issue. Finally, in the future, this man should be salvageable since a patient with an acute, non-infectious, non-malignant illness which is otherwise fatal should be an ideal candidate for liver transplantation.

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We can readily understand how a chronic enlargement of the tonsils, by interfering with the normal respiration, can lead to consumption. Only a portion of the requisite amount of air can be respired, and the development of the chest is thus interfered with. Indeed, we may even say that the capacity of the chest diminishes as the tonsils enlarge. Dupuytren was the first to notice that children whose tonsils were enlarged ended by having a deformed chest. In them the thorax was rounded behind, retracted in front, and flattened at the sides. Reduction of the tonsils relieves the aerial tract from the barrier, and permits the lung, and consequently the chest, to regain its regular dimensions.

—Transactions of New York State Medical Society, 1871

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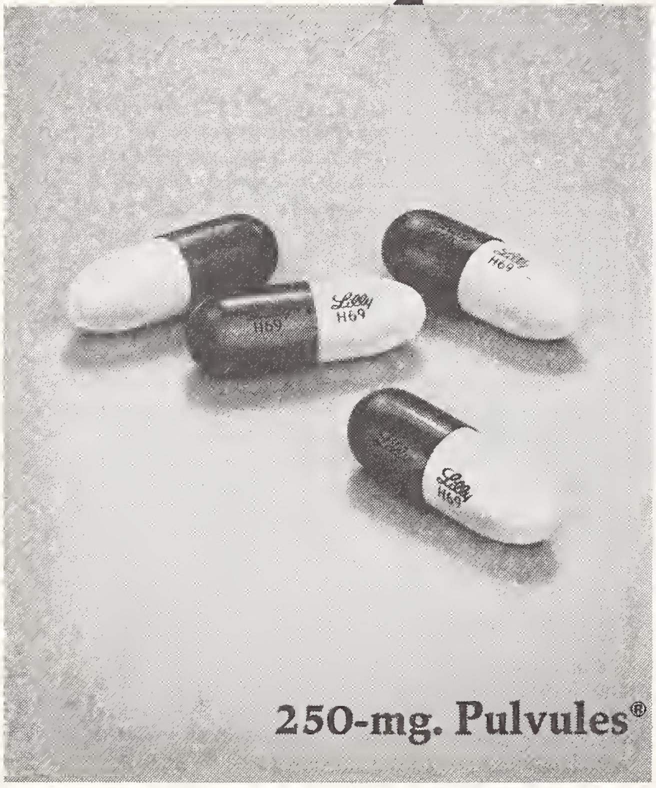
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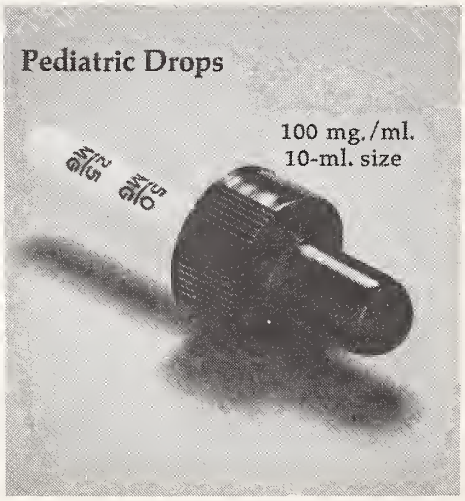
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Psychiatric Liaison Nursing at Yale-New Haven Hospital

DIANNE SCHILKE DAVIS, M.S.N. AND JILL K.N. NELSON, M.S.N.

Psychiatric liaison nursing (PL Nursing) is a relatively new subspecialty within psychiatric nursing. In the 1960s psychiatric nurses in general hospitals started writing about crossing the boundaries between the inpatient psychiatric units and the medical surgical services.[1] [2] [3] [4] [5] [6] They served as consultants to their medical and surgical nursing colleagues in the psychological management of problematic patients. In the intervening years the role has expanded to include both direct and indirect consultative activities.[7]

Because the role has evolved in response to the needs of particular institutions, there is no single job description for the PLN. The position differs from hospital to hospital both in the functions it includes and in its relationship to existing psychiatric services. PL Nursing as a designated role was introduced at Yale-New Haven Hospital in 1973 by Jill K.N. Nelson. The position was established and funded by the three institutions comprising Yale-New Haven Medical Center, Inc.: Yale School of Nursing, Yale School of Medicine, and Yale-New Haven Hospital. The Yale School of Nursing has a long tradition of joint clinical and academic appointments for the psychiatric nursing faculty. In addition, Yale-New Haven Hospital, a teaching hospital, maintains a strong psychiatric consultation service whose members are faculty in the Department of Psychiatry of Yale School of Medicine. The PLNs are members of the Psychiatric Consultation Liaison Service, and faculty of Yale Schools of Nursing and Medicine. They function as psychiatric liaison nurse specialists within the Department of Psychiatric Nursing of Yale-New Haven Hospital. This broad base of support has provided a number of distinct advantages which have allowed PL Nursing to become firmly established here in the last five years.

The two PLNs at Yale-New Haven Hospital have ongoing liaison relationships with a number of medical and surgical units where they function in clinical roles without administrative responsibilities. As members of the Department of Nursing they have ready access to the patients and nursing staffs of these wards. The PLN as a consultant is a resource for the staff nurse to heighten her understanding of the psychosocial needs of her patients and to help her differentiate normal from abnormal responses to the stresses of physical illness and hospitalization. She helps the nurse plan care that is psychologically supportive to the patient. When appropriate, the PLN accepts referrals from staff nurses, physicians and other members of the health care team to intervene directly with patients and families in crisis. This intervention is often primary prevention for patients who are at risk for or in the early stages of emotional difficulties. These patients and families might not otherwise have contact with psychiatric professionals. This intervention is considered a part of the nursing care in the hospital and patients are not currently charged for psychiatric liaison nursing services.

Since referrals are informal and patients are not necessarily admitted primarily for psychiatric treatment, appropriate information is usually shared verbally with members of the health care team rather than in written chart notes. More formal progress notes are written in the patient's chart when specific requests are made by physicians around issues of drug abuse or previous psychiatric illness. As in any consultation relationship, primary responsibility for the patient remains with the physicians and nurses caring for him. The PLN intervenes to facilitate the care of patients and families given by the health care team.

As faculty members of the Psychiatric Consultation Liaison Service the PLNs work closely with the psychiatrists and second year psychiatric residents. The residents respond to formal requests for psychiatric consultation from the medical/surgical physicians. The collaborative work of the psychiatric residents and PLNs enhances the scope of these consultations by promoting a comprehensive view of the patient in his

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psychosocial context. Dynamics considered in the consultation process include the interrelationships of the patient, his illness, his family, the health care team, and the hospital environment. Because she has ongoing relationships with the health care team on the medical and surgical units, the PLN is in a unique position to see that psychiatric recommendations are understood by the primary care givers, and to facilitate their implementation. The PLN and the psychiatric resident often jointly follow patients and their families when they present complex psychosocial problems for their nurses as well as their physicians. Weekly psychiatric rounds with the nursing staff, the PLN and the psychiatric resident provide an opportunity to discuss issues of patient management as well as nursing concerns and feelings about particular patients.

The PLNs at Yale have masters degrees in psychiatric nursing. They are members of the Yale-New Haven Hospital Department of Psychiatric Nursing and are identified throughout the medical center as psychiatric nurse consultants. This is consistent with the notion that PL Nursing utilizes psychiatric concepts and principles to understand and intervene with patients and patient care problems in a medical surgical setting. The PLNs are the primary faculty for the psychiatric liaison nursing track within the Yale School of Nursing Psychiatric-Mental Health Nursing Program. This specialty track is designed to prepare PLNs at the graduate level. The presence of psychiatric liaison track faculty as practitioners within the hospital provides the graduate nursing students with effective role models and maintains quality sites for their clinical practice.

A typical day for the PLN reflects this multifaceted role of teacher, clinician and consultant. She may start the day at the School of Nursing supervising the clinical work of a graduate nursing student and teaching a class in crisis intervention. On to the hospital she meets with the orthopedic nursing staff to help them plan the care of an agitated patient in alcohol withdrawal and an elderly woman whose chronic organic brain syndrome has been exacerbated by her admission to the hospital with a fractured hip. These psychiatric rounds may at times be devoted to discussing nurses' feelings about their work, particularly after the death of a patient to whom they were attached. Next she meets with the spouse of a young man dying of lymphoma who is trying to decide how to tell her small children that their father will not be coming home again. In the hall, the PLN is stopped by a surgeon who is admitting a woman for a mastectomy. The physician hopes the PLN will stop in to see the patient and give her some extra support. Over lunch the staff and residents of the Psychiatric Consultation Liaison Service meet for clinical rounds. Here the residents and PLNs present the cases they have seen in consultation.

The afternoon brings a call from the Nursing Resource Department. They are preparing a series of inservice education programs on cancer nursing. They want the PLN to talk about the psychological responses to cancer. Continuing her rounds of the hospital, the PLN stops to see a man whose automobile accident has left him a bilateral amputee. The staff are worried because he does not seem to have grieved the loss of his legs. Next she interviews a woman admitted for a mitral valve replacement. During their preoperative teaching, the nurses have noticed that she seems unusually anxious. By meeting her before surgery, the PLN will be able to more effectively support her during her postoperative stay in the Surgical Intensive Care Unit. On the plastic surgery service the PLN and psychiatric resident go together to assess the medication needs of a severely burned woman who is in pain and depressed. The staff has been reluctant to medicate her with antidepressants because of the numerous grafting procedures which lie ahead. After seeing the patient they meet with the intern and the primary nurse. Together they decide that her depression can be dealt with by adequate narcotic analgesia, a consistant relationship with her primary nurse, and brief daily visits by the PLN. A young man has just been admitted to the intensive care unit after taking an overdose of sleeping pills. To plan safe treatment for this patient through the night requires evaluation of his suicide potential. While the psychiatric resident is assessing the patient, the PLN interviews his girlfriend. They decide that the patient continues to be a serious risk and discuss suicide precautions with the nurses and house staff.

As with any new role, it has taken time and persistence for PL Nursing to establish itself at Yale-New Haven Hospital. When medical and nursing staff are introduced to a new and unfamiliar professional role, they tend to respond to the person in the role. If the PLN is available to the staff and indicates an interest in responding to their needs, problems are presented which give her the opportunity to prove her skill. Once she has proven her competence, she is accepted as a psychiatric consultant and her services are utilized. Each PLN sees approximately 150 patients a year. Since the role has been established within this institution, more and more nursing staffs are specifically asking for the services of PL Nursing. These requests come from various nursing staffs, ranging from the abortion clinic, to the newborn special care unit, and the oncology unit. Even though the role has been established, each new relationship between the PLN and a particular nursing staff undergoes a similar testing period. The existence of the role in an institution is not enough to guarantee acceptance. Individual PLNs must establish their own credibility in the system to become effective consultants.

Nurses have been very receptive to PL Nursing. They are eager to improve their own assessment and intervention skills, and have been pleased to have a psychiatric consultation and referral resource which does not depend upon a physician's specific request. Physician response, though mostly positive, has been more variable than that of nursing. The physicians tend to respond to the PLN as a psychiatric professional. If they have found psychiatric resources helpful in the past, they utilize this easily available psychiatric professional. If the particular physician feels that psychiatry has little to offer in the care of medical/surgical patients beyond committing the obviously insane patient, he is unlikely initially to be any more responsive to the PLN.

Psychiatric liaison nursing is evolving in response to powerful trends within the general hospital. Nurses are taking more responsibility for their own practice, and looking within their profession for expert consultation. In addition, the role of psychological factors in health and illness and the importance of treating the "whole person" is more widely recognized by all health care professionals. The psychiatric liaison nurse has the potential to respond to these changes in the delivery of health care.

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The Center has four operating rooms, a preoperative admitting room, a postoperative recovery area with separate facilities for adults and children, and diagnostic laboratory and radiological capability. The staff, which includes Board certified anesthesiologists and professional nursing personnel is under the direction of A. Richard Pschirrer, M.D., Medical Director. Bernard Kershner is President and Executive Director of the Center. More than 100 surgeons, oral surgeons, and dentists have applied for medical staff appointments.

Patients undergo surgery in a well-equipped, safe and comfortable environment under the care of the professional staff and return to their homes and families the same day. Procedures performed at the facility include gynecologic, pediatric, orthopedic, dental, plastic, ear, nose and throat, general, urologic and eye surgery, and endoscopic examination.

The Center has been approved by the Connecticut State Commission on Hospitals and Health Care and has been licensed by the Connecticut State Department of Health.

Participation by patients and physicians in this program will reduce medical costs, since by actual comparison, the cost at the Center will be significantly less than the same procedure performed in a hospital.

The Surgical Center has been strongly supported by insurance companies, health planning organizations and area physicians. Blue Cross/Blue Shield of Connecticut and the Connecticut State Department of Social Services have designated the Center a Participating Provider and will provide benefits to beneficiary patients utilizing the facility. Surgical procedures performed at the Center and appropriate fee schedules have been approved by the Commission of Hospitals and Health Care and accepted by Blue Cross.

In addition to the practical appeal of cost-control, the reception of the facility in its first two months by patients and surgeons alike has been unanimously positive. The opinion has been expressed that this is a mode of medical care whose time has come. Physician inquiries regarding staff privileges, or further general information requests, will be gladly answered. Privileges at Temple Surgical Center are available to all qualified physicians in the greater New Haven area on an open staff basis, after a review of credentials similar to that of applicants to a general hospital.

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Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

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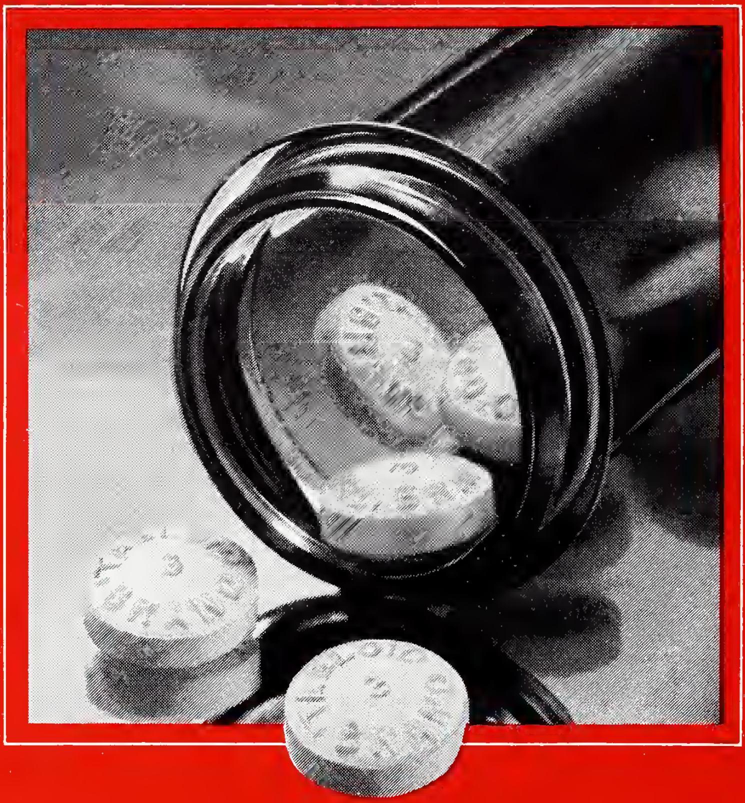

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PSRO and HSA

A Federal System of Local Health Care Regulation*

DAVID A. DITTMAN, PH.D. AND JEFFRY A. PETERS, M.M.

Introduction

In this paper we will identify PL 92-603 (PSRO) and PL 93-641 (HSA) as a foundation for a health care regulatory system. In the first section several factors are presented that, in our opinion, promoted the enactment of these Federal laws. The next section demonstrates how PL 92-603 and PL 93-641 regulate the supply of and demand for health services. The economic impact of this regulatory system on our nation's health care delivery system is analyzed in a normative manner. We conclude that in the short run this legislation if effectively implemented will increase the short-run cost per patient day in short-term acute care institutions.

Factors for Congressional Enactment

Over the past decade, the demand for health services has increased dramatically. This nation has come to look upon health care as a right and has provided medical insurance through Medicare and Medicaid to people previously unable to afford adequate coverage. At the same time, the portion of our work force covered by private insurance has increased. Over 80 percent of the population is now covered under some form of a prepayment plan, with much of the cost borne by major employers and the government.[1] Therefore, the full cost of receiving care is not recognized by individuals when treatment is sought.

While third-party coverage has expanded, our traditional delivery system has been preserved. Pauly[2] argues that consumers will substitute inpatient treatment for outpatient care when the former and not the latter is covered by insurance. Physicians will typically go along with their patient's desires since they are paid on the fee-for-service basis. Physicians, particularly in surgical specialties, may have a financial incentive to hospitalize as many patients as is consistent with accepted quality standards. The hospital setting allows the doctor to shift his most time-consuming chores onto hospital personnel and treat a greater number of patients per hour than on an outpatient basis. The lack of price competition among physicians prevents this greater physician productivity from being translated into lower physician fees for in hospital services as compared to fees for outpatient services.[3]

Many hospitals have responded to this increased demand by adding beds, equipment and personnel. The extra facilities have enabled local hospitals to provide a higher intensity of care, attract specialized physicians, and increase their revenue. Martin Feldstein[4] has empirically demonstrated that the availability of beds increases admissions and mean stay, that an additional specialist (hospital-oriented physician) increases utilization of hospital services by $39,000 per year, and that an additional general practitioner has the opposite effect. Hospital costs have been further aggravated by advances in technology that necessitate the purchase of new and extremely costly equipment.[5] In addition, hospitals are usually reimbursed on a percent-of-cost basis. The higher an institution's cost, the more money it can receive. Incentives for efficiency have typically been absent from reimbursement formulas.[6]

Compounding these financing problems is a change in the demographic makeup of the nation. There has been a continued decrease in the number of births

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This paper is an adaptation of "A Foundation for Health Care Regulation: PL 92-603 and PL 93-641," by David A. Dittman and Jeffry A. Peters, Inquiry, *(March 1977), and as such some sections have been reprinted here in whole or in part with permission of* Inquiry.

while our life expectancy has expanded, resulting in a more elderly population. Medical science has also been quite successful in eliminating many of the causes of acute, episodic illnesses.[7] All of these factors have increased the prevalence of chronic illness and have forced us to investigate efficient and effective means of coping with these long-term medical problems. As a result of a more chronically-ill, elderly inpatient population, the Federal government as insurer through Medicare will continue to pay an increasing share of the nation's health expenses.

Congress has developed new regulatory legislation that has attempted to deal with each of these problems. The two most important laws are PL 92-603 and PL 93-641. The Professional Standard Review Organization (PSRO) provision in PL 92-603 attempts to assure effective, efficient, and economical delivery of medical care. The law's aim is to reduce unnecessary medical procedures and minimize length of stay through reducing medically unnecessary inpatient days by encouraging physicians to use outpatient and extended care facilities. As we will investigate, PSROs can be used to redistribute the demand for hospital services. PL 93-641 ties in with PL 92-603 in that it provides the mechanism to adjust the supply of health facilities to correspond to the adjustment in demand. The law requires local agencies, called Health Systems Agencies (HSAs), to evaluate an area's health services, manpower, and facilities, and implement a plan that meets identified needs and reduces documented inefficiencies.

Overall Impact on the Health Care Delivery System

Regulation of Demand

The purpose of PSRO (PL 92-603) is to examine the care provided to patients covered under Title V (Maternal and Child Health and Crippled Children's Services), Title XIX (Medicare), and Title XVIII (Medicaid), and assess:

1. The necessity of the services rendered;
2. The appropriateness of the facility, i.e., the PSRO must assure that care is provided in the most economical facility available, consistent with quality health care;
3. The quality of care, i.e., a PSRO must assure that the care delivered by an institution meets the acceptable "standards" that have been established by the PSRO.

The PSRO provision is designed to monitor the delivery of institutional care, and this objective is accomplished through the establishment of a detailed review procedure.

Each hospital—or PSRO, if a hospital does not have an effective review process—is required to establish norms and criteria for care. The norms established are to be based on reasonable local patterns of practice and must be approved by a national standards review council. The norms and criteria developed will be used by the PSRO coordinators in individual institutions to approve admissions, assign an appropriate length of stay, certify extensions of the initial length of stay, and insure that all cases are handled in an appropriate manner. To insure that all review coordinators have adequate data on which to base decisions, each patient's medical record must contain as a minimum:[8]

- ☐ Person identification: patient name, medical record number, social security number, claim number (or expected principal source of payment)
- ☐ Admission date and hour
- ☐ Discharge date
- ☐ Attending physician: name, social security number
- ☐ Operating physician: name, social security number
- ☐ Date of birth
- ☐ Sex
- ☐ Race
- ☐ Residence (U.S. Post Office Zip Code)
- ☐ Hospital identification (Medicare provider number)
- ☐ Diagnosis: principal diagnosis, other diagnoses
- ☐ Procedures and dates: principal procedure, other procedures
- ☐ Disposition of patient
- ☐ Expected source of principal payment
- ☐ Number of days certified at admission
- ☐ Admissions certification process
- ☐ Basis for assignment of initial length of stay
- ☐ Admissions certification level of review
- ☐ Total number of days certified
- ☐ Total number of reviews referred to physician advisor
- ☐ Total number of extension approvals
- ☐ Extension denials

This data set is called the PSRO Uniform Hospital Discharge Data Set (PHDDS).

Abstracts of the medical records will be regularly processed to produce profile reports for all PSROs, hospitals within each PSRO region, patients, and all physicians using hospital and extended care facilities. The profile reports will contain aggregate data on surgical rates, length of stay, frequency of admission for given diagnoses, frequency of given medical procedures, frequency of complications, number of days originally certified and extensions, days certified versus days used, and other pertinent data. Institutional review committees can then detect any physician whose pattern of practice deviates from the norm, investigate the matter, and take any corrective action that may be necessary. Likewise, summary data will be available to compare hospitals within a region and different PSRO regions throughout the country. Aberrant trends could be pinpointed. PSROs and individual hospital utilization review committees will then be required to undertake Medical Care Evaluation (MCE) studies. MCEs, which qualify as patient care audits required by the Joint Commission on Hospital Accreditation, are designed to encourage hospitals to examine admission and length of stay patterns as well as the results of patient care on a regular basis.

Regulation of Supply

The National Health Planning and Resource Development Act of 1974 (PL 93-641) ties in with the PSRO legislation by attempting to regulate the supply of health institutions and facilities physicians will have access to in a given area. The various agencies established under this law are encouraged to request statistical data assembled by PSROs. They also will have the authority to obtain additional data they may need to insure that a local area's health facilities correspond to its needs.

The Health Systems Agency (HSA) must by law (PL 93-641) determine health status goals and health system goals for its area and propose recommended long run programs for the accomplishment of these goals. A document called the Health Systems Plan (HSP) articulates these long run community goals and programs and must be made available to the community. Each year the HSA is required to develop a series of programs to be pursued within the current year as a current step in implementing the Health Systems Plan. This document which outlines the current year's objectives and programs is called the Annual Implementation Plan (AIP). The main objective of the HSA is regional health planning. Thus it desires to synchronize the health needs of the community as characterized by the community's Health Status Goals with the local health delivery system. Deficiencies in the local health delivery system are documented and recommended corrections to the health delivery system are stated in the HSP as Health Systems Goals. Therefore, in the Health Systems Plan:

Health Status Goals describe the desired achievements in the health status of the residents of the agency's health service area, and are measured by indicators of morbidity, mortality, disability and other measures which reflect or influence the population's health and the requirements for health services.

Health Systems Goals describe the desired achievements with respect to the health systems of an area. These goals define deficiencies of the environment and other nonmedical inputs into the population's health status as well as deficiencies in the medical delivery systems with the HSAs service area. Therefore the Health Systems Plan articulates the HSA opinion as to the necessary adjustments that should be made in the Health Delivery System and the Health Status of the area's population.

The HSA and state agencies have the leverage to thus making the needed adjustments in the health delivery system through their power to deny a certificate-of-need for any planned capital expansion projects, and their control over all Title XVI funds if individual institutional requests are inconsistent with the HSP.

The clout of the certificate-of-need provision is obvious. For an institution to spend over $100,000, change its bed capacity, or substantially change its scope of service, the Health Service Agency and the state must concur that the expenditure meets regional medical needs.[9] For example, if a region's profile shows an abnormal number of surgical operations which are taxing the present hospital facilities, it is unlikely that a certificate-of-need would be granted to expand surgical capacity. The medical providers would have to find another answer to their capacity problems, i.e., curtail demand, surgeon migration. If a region shows an excessive number of in-hospital days because of a lack of extended care beds, plans for additional extended care beds will most likely be approved while plans for the expansion of acute short-term beds will not. The supply of health facilities will be further curtailed by the ceilings placed on Title XVI funds going to rapidly growing areas and the floor placed on allotments for construction of new outpatient facilities. These restrictions are designed to provide health care delivery systems with incentives to construct alternate sites (other than acute care hospitals) for the provision of medical care. The PSROs have the power available to insure that these alternate facilities are eventually used by denying extended hospital stays when medical needs can be met at alternative sites.

As explained, PL 92-603 and PL 93-641 reinforce one another. The PSRO affects the physician in his role as a decision-maker in determining what institution and what services his patients need. The intermediary in turn has the power to withhold reimbursement to any providers who do not comply with the standards established by local PSROs for Title V, XVIII, and XIX patients. Therefore, we can see that a mechanism exists to potentially regulate the overall demand for services (necessity of services rendered) and to insure that the overall mix of services being demanded will more closely approximate the characteristics for which the institution was designed. The ultimate effect, if the regulatory mechanism is fully utilized, will be a more efficient allocation of Federally insured patients to the institution that can provide the most economical service.

PL 93-641 over the long run strengthens PL 92-603 by providing the mechanism to change the mix and amount of capital facilities to which physicians will have access. Salkever and Bice[10] have demonstrated from a cross-section, multiple regression analysis of investment by non-Federal, short-term general and other special hospitals, that certificate-of-need decisions have restricted investment in new beds. Therefore, an extrapolation of these results to the introduction of certificate-of-need requirements on a nationwide basis (PL 93-641) suggests that the relative number of hospital beds should not keep pace with demand. This tightening of bed capacity should sensitize physicians to review their admission (medical necessity) and utilization (length of stay) policies.

The Short-Run Effects of Regulation
PL 92-603

The main thrust of the PSRO legislation is to promote effective and efficient delivery of health care without eroding (hopefully, improving) the quality of the care delivered. These objectives are not new to firms that operate in the free market mechanism. Industry has for years been in pursuit of the exact same goals. The profit goal of the for-profit firm has maintained pressure on its management to produce the least expensive, quality product. Competition in the market for goods and services has assured quality if the profit goal is to be achieved. Rational consumers, free to choose among competing products, make their preferences known on their tradeoff between selling price and quality of products. Once the market determines the quality-price tradeoff, it is up to the for-profit firms to produce the goods demanded at the least expense. While this may seem simplistic, and indeed the above description is, it is the intent of PSRO legislation to exert some of the same pressures on health care delivery system.

It is the physician who is the interface between the patient (consumer of services) and the health care institutions (provider of services). While the physician is the allocator of patients to institutions, the implicit assumption of PSRO legislation is that the physician is not an unbias allocator.[11] There is a strong reciprocal interdependence between the physician and the various institutions. The physician, as a primary deliverer of health care, has found that he can most efficiently deliver health care if his service population is divided into two groups: ambulatory patients whom he can treat at his office, and institutionalized patients whom he generally centralizes at one or two community hospitals. By concentrating his non-ambulatory patients at a centralized location he has a more efficient use of his time. Pauly supports this argument for physicians who charge on a fee-for-service basis:

> The fact that patients will get marginally better care in the hospital (even if the benefits, in some sense, fall short of the cost) and that the hospital may be a convenient, centralized location for the physician to see his patients (even though the costs of travel and disutility are less than the hospital cost) will induce the physician to put patients in the hospital even if patients were indifferent on financial grounds.[12]

The PSRO will promote an allocation of the non-ambulatory ,patient according to medical necessity among a strata of institutions, each according a different level of care. It is our observation that, in the short run, the utilization of short-term general hospitals will decrease due to a concentration by PSROs on minimizing length of stay (through concurrent monitoring), while the total number of admissions will remain constant, *ceteris paribus.*

Since Title V, XVII, and XIX patient days constitute a substantial portion of the patient population in short-term voluntary hospitals, any reduction in the average length of stay of this segment of the patient population will reduce the institution's utilization (total number of patient days) provided no excess demand exists. With PSRO review being applied only to Federally insured patients, a reduction in their percentage utilization will shift a larger portion of an institution's fixed cost to private third parties and the self-insured. The logical mechanism for private third parties to use to reduce the average length of stay of their patients is an expansion of PSRO review to encompass their patients. Consequently, total utilization by all significant groups should be reduced as third parties try to reduce their proportional share of the institution's fixed cost. In fact, there is some evidence that this adjustment may already be occurring. Twenty-four Blue Cross Plans (39 percent of all Blue Cross Plans) require utilization review as a contract requirement.[13] And the Health Insurance Institute supports the concept of peer review inherent in the PSRO legislation and has urged its extension to the entire population.[14]

There has been no short-run effect on admissions since prospective review (pre-admission or advanced approval of elective admissions) has not been implemented. In the long run, it could be argued that the patient population will be smaller (due to retrospective profile analysis and assuming no change in demand) and will comprise a more acutely-ill patient mix, probably indicating a higher average length of stay. However, it is impossible to accurately project a change in the number of patient days since it is a function of the number of admissions (which depends upon future area demand) multiplied by the average length of stay.

Since the fixed costs (estimated to constitute two-thirds to three-quarters of total operating cost)[15] will remain constant in the short run, the new average cost per patient day will depend upon the relative change in the immediate variable cost-savings and the change in the number of patient days.

The average cost per patient day can be viewed from the following identity.

$$\text{Average Cost per patient day} = \frac{\text{Total Cost}}{\text{Total patient days}} = \frac{\text{Total fixed cost + total variable cost}}{\text{number of admissions x average length of stay}}$$

If the total patient days decrease as hypothesized, the average cost per patient day will increase unless the decrease in the total patient days is offset by a decrease in variable cost. The decrease in variable cost must be greater than or equal to the decrease in the total number of patient days multiplied by the ratio of total cost to the total variable cost, before the change.[16]

While a hospital has the ability to reduce variable cost (e.g., manpower, supplies, etc.) as the number of patient days decreases, the foundation for regulation presented here does not include an incentive for them to do so. Since the same total reimbursable cost will be spread over a smaller number of patient days we conclude that average cost per patient day will increase in the short run. While the short run economic effect may in fact be counter to the PSRO legislation, the PSRO mechanism as a cost-effective means to reduce medically inappropriate inpatient stays is suspect. Averill and McMahon's[17] determined through simulation that concurrent stay certification as implemented under current Federal regulation is not cost-effective. Dittman and Magee[18] have developed a model for determining the optimal investigation procedures for utilization review and their findings also indicate that concurrent stay certification as currently implemented has a benefit-cost ratio much less than one. These preliminary results seem to indicate that while PSRO through its process of concurrent stay utilization review may be reducing medically unnecessary inpatient days, it is, at the same time, adding to the rising cost of medical care through an inefficient utilization review system. Even though the PSRO system may be inefficient and not cost justified, it does represent a formable regulatory mechanism to effect a change in facility utilization.

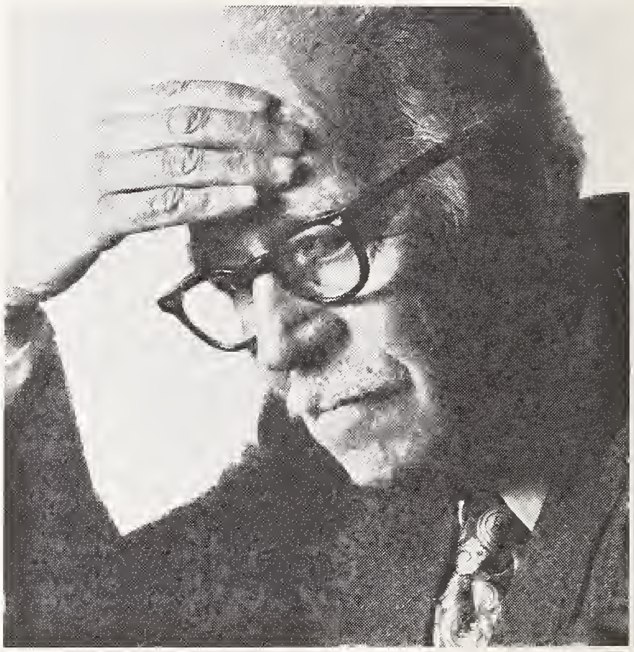
PL 93-641

The effect of the National Health Planning and Resource Development Act on short-term voluntary community hospitals should be similar to that of the PSRO legislation. We hypothesize a decrease in the utilization of inpatient facilities and an increase in the utilization of outpatient facilities. This is a basic goal of HMOs, which have a priority under PL 93-641. Doctors participating in either prepaid group practices or individual practice associations are encouraged to keep their patients out of the hospital through financial disincentives. This was supported by Donabedian[19] in his comparison of admission rates for the Health Insurance Plan of New York (HIP) with other types of practice organizations in New York City. He found HIP admission rates substantially lower in precisely those diagnostic categories most often suspected to comprise unnecessary admissions—tonsillectomies and upper respiratory infections. Roemer, *et al.*,[20] found the length of hospital stay under prepaid group practice plans to be approximately one-half that for commercial and provider insurance plans.

Since the HMO has a financial incentive to efficiently allocate patients, the short-term hospital will probably have a higher mix of more severely-ill patients. The less critically-ill inpatient and ambulatory patient will now be more frequently treated in nursing facilities or on an outpatient basis. Because of this short-run decline in occupancy, hospitals will see their average cost per patient day rise. The patients now admitted to the hospital will require a greater intensity of care in terms of nursing hours per patient day, therapeutical procedures, etc. These trends should accelerate as communities construct extended care facilities to meet the needs of chronically-ill patients. Increasing availability of alternative facilities with a lower intensity of services will lead to a decrease in the length of stay of patients in short-term acute care hospitals.[21]

The certificate-of-need and Title XVI fund restrictions should also help to intensify the developments initiated by other provisions of this act, and will further rationalize the distribution of health resources in an area. Pressure can be exerted to minimize additional construction and duplication of health facilities. Historically, hospitals have increased their occupancy rates in the long run by expanding their capital base and their service mix. Pressure could now be exerted for the construction of extended care and outpatient facilities. This pressure should reduce the ratio of inpatient beds needed to serve a given population, which over time should enhance the utilization and occupancy rates of the remaining inpatient beds. As the supply of hospital beds becomes restricted the utilization of alternative facilities should expand. Martin Feldstein[22] supported this when he empirically demonstrated that in areas of greater-than-average bed scarcity physicians economize on hospital beds by transferring relatively more patients to extended care facilities.

A TOTALLY NEW DELIVERY SYSTEM TO HELP REDUCE THE FEAR OF ANGINAL ATTACKS



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INDICATIONS: Based on a review of this drug by the National Academy of Sciences — National Research Council and/or other information, FDA has classified the indications as follows:

"**Possibly**" **effective:** For the relief of angina pectoris (pain of coronary artery disease). ISO-BID is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris. Final classification of the less-than-effective indication requires further investigation.

CONTRAINDICATION: Idiosyncrasy to this drug.

WARNINGS: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

PRECAUTIONS: Use with caution in patients with glaucoma. Tolerance to this drug, and cross-tolerance to other nitrates and nitrites may occur.

ADVERSE REACTIONS: Cutaneous vasodilation with flushing. Headache may commonly occur, and may be both severe and persistent. Transient dizziness and weakness, in addition to other signs of cerebral ischemia associated with postural hypotension may occasionally be seen. ISO-BID can act as a physiological antagonist to norepinephrine, histamine, acetylcholine and many other medications. An occasional patient may show marked sensitivity to the hypotensive effects of nitrite; severe responses (nausea, vomiting, weakness, restlessness, pallor, excessive sweating and collapse) can occur, even with the usual therapeutic dosage; alcohol may enhance this effect. A drug rash and/or exfoliative dermatitis is occasionally seen.

SAMPLES AND LITERATURE AVAILABLE.

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Conclusion and Additional Observations

This paper analyzes the possible effect of recent Federal legislation on the health delivery system and its associated costs. It identifies how key provisions of PL 92-603 and PL 93-641 combine to form a mechanism that can be used for the regulation of health care delivery at the local level.

The Federal Government enacted the PSRO legislation to enable it to control its expenditures for Title V, Title XVIII, and Title XIX patients. In the short run, the Federal Government will be able to reduce its expenditures 1) if it can obtain a reduction in Federally covered patients' utilization of individual institutions relative to other users, or 2) if it can develop an effective utilization review mechanism with annual operating costs less than the total annual variable costs saved by reducing the average length of stay of Federally insured patients. However, if other third parties reduce their patients' utilization by a proportional amount, at least in the short run, the Federal Government will incur the same or a greater aggregate level of expenditures at a higher average cost per patient day, in short-term hospitals. Recent studies of current PSRO policy indicate that utilization review is not worth the cost even if total absorption cost were used as a measure of the benefits. Therefore, it is highly doubtful under current Federal regulations that the PSRO program will accrue the proposed savings in health care reimbursement expenditures needed to offset the PSRO program costs which are currently committed to be paid from the Medicare Trust Fund.

Similarly, if certificate-of-need legislation decreases expenditures on beds by shifting hospital investment into other areas of the hospital, as Salkever and Bice observed,[25] then the total fixed cost of hospital care may not be reduced in the long run. The total Federal expenditures may increase in the future if PSRO and certificate-of-need combine to stimulate added expenditures in outpatient facilities and extended care facilities, without an offsetting reduction in inpatient beds and ancillary services.

Consequently, while a mechanism exists for regulation, its ability to reduce the rapidly rising cost of health care is not assured. And since a reduction in utilization is a possible result, it may even cause a rapid increase in the cost per patient day in the short run.

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    On the other hand, Mark Pauly and Michael Redisch ["The Not-For-Profit hospital as a Physician's Cooperative," *American Economic Review* 63:97-99 (March 1973)] present a model in which the physician emerges as a traditional income maximizing economic agent who is "discovered" in a decision-maker role within the hospital.
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16. Here we wish to establish the relationship between the change in variable cost and the change in total patient days.

    If we let: PD^B = the total number of patient days at the institution before legislation.
    F^B = the total fixed cost of the institution before legislation.
    V^B = the total variable cost of the institution before legislation.
    δ_2 = the change in total variable cost due to the legislation.
    δ_1 = the change in the total number of patient days due to the legislation.

    Then if the average cost per patient day is to be reduced or remain the same after the legislation as before and assuming fixed cost cannot change in the short run, we have:

$$\frac{F^B + V^B}{PD^B} > \frac{F^B + V^B (1 - \delta_2)}{PD^B + (1 - \delta_1)}$$

δ_1 and δ_2 are subtracted. Since we assume that both total variable cost and number of patient days will decrease.

Solving for δ_1 in terms of δ_2

$$\delta_1 < \frac{V^B}{F^B + V^B} \delta_2$$

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The Blues and Second Opinions

Twenty-seven Blue Cross and Blue Shield plans will reimburse for second opinions on the need for elective surgery recommended by physicians. "Many more plans" are expected to be involved in second opinion surgery programs in the near future, Blue Cross-Blue Shield reported.

Under the program, all charges related to the second opinion including the consulting specialist's fees, x-rays and laboratory tests, are covered by the plans. If the second opinion differs from the first, some plans pay for a third opinion to help the subscriber decide whether or not to have surgery.

Walter J. McNerney, President of the Blue Cross and Blue Shield Associations said a major purpose of the pre-surgical consultation programs is to determine the extent to which an additional independent opinion results in significant savings or in improvement of patient care by reducing the incidence of elective surgery.

The Blues released the statement on second opinions to coincide with the scheduled official launching of HEW's second opinion program for Medicare and Medicaid. The Government plans an extensive publicity campaign to encourage the public to seek second opinions when suitable.

In comment upon the HEW program James H. Sammons, M.D., AMA Executive Vice President, commented: "The concept of second opinions is not new to the medical profession. The AMA has for years supported voluntary consultation. The Association's Principles of Medical Ethics specifically state that, 'A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.'

"The Department of HEW claims that its national second opinion program will be cost reducing. However, such a program promises to increase utilization of physician services as Medicare and Medicaid patients across the country are urged to seek a second opinion before all non-emergency surgery. Short-term results of several experimental second opinion programs have not provided clear evidence that a national program of this type will either improve the quality of care or reduce health costs."—*Month in Washington.*

JCAH: The Voluntary Approach to Quality Assurance

JOHN E. AFFELDT, M.D.

In any profession essentially two alternatives exist for establishing standards by which actual practice can be measured. Government through regulation may take the responsibility or the professionals themselves may assume the responsibility through voluntary action.

Providers in America's health care system have supported the voluntary alternative to quality assurance activities by creating the Joint Commission on Accreditation of Hospitals (JCAH) to function as its internal conscience. Through the establishment and support of the Joint Commission, the health care profession has expressed its commitment to shoulder the responsibility for evaluating and improving the quality of health care provided. Thus, accreditation by the JCAH represents recognition of a voluntary commitment to strive to deliver the finest achievable health care services.

Contemporary political, social, and economic forces impacting the health care sector provoke consideration of the validity of the alternative chosen by health care providers. Is there a continuing place for voluntary accreditation? Or, should government embrace this responsibility of establishing standards for the health care profession?

As the success of the standardization program increased, so did its costs. By 1950, more than two million dollars had been spent on the program, which depended upon ACS membership dues as its only source of income. Unable to continue sole support of the program, the College solicited the involvement of other national professional organizations.

The American College of Surgeons, the American College of Physicians, the American Hospital Association, the American Medical Association, and the Canadian Medical Association met on Dec. 15, 1951, in the Drake Hotel in Chicago to form the Joint Commission on Accreditation of Hospitals. (The Canadian Medical Association withdrew in 1959 to participate in its own national hospital accreditation program.) The hospital standards that had been developed over a period of 35 years by the American College of Surgeons were adopted by the Joint Commission, and the hospitals listed by the hospital standardization program were accepted by JCAH for accreditation.

Purpose of JCAH

Incorporated in Illinois as a private, not-for-profit corporation, the Joint Commission articulated its purpose, which has remained basically unchanged, in its official bylaws:

> The purpose of the JCAH is to establish standards for the operation of hospitals and other health-related facilities and services.
>
> . . . to conduct survey and accreditation programs which will encourage members of the health care professions, hospitals and other health-related facilities and services voluntarily to:
>
> —Promote high quality of care in all aspects in order to give patients the optimum benefits that medical science has to offer.
>
> —Apply certain basic principles of physical plant safety and maintenance and of organization and administration of function for efficient care of the patient.
>
> —Maintain the essential services in the facilities through coordinated effort of the organized staffs and the governing bodies of the facilities.
>
> . . . to recognize compliance with standards by issuance of certificates of accreditation.
>
> . . . to conduct programs of education and research and publish the results thereof, which will further the other purposes of the corporation, and to accept grants, gifts, bequests and

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> devices in support of the purposes of the corporation.
>
> . . . to assume such other responsibilities and to conduct such other activities as are compatible with the operation of such standard-setting, survey and accreditation programs.

To accomplish its purpose most effectively, the Joint Commission assumed the role of an evaluator, educator, and consultant, helping facilities to identify both strong and weak points and providing guidelines to assist in improving performance.

Advent of Medicare

The nineteen sixties ushered in an era of change, producing a political climate ripe for triggering major alterations in American thinking. It was a time characterized by questioning, protest, and turmoil when the nation's traditional value system was under considerable scrutiny. It became public consensus that every American was entitled to a reasonable degree of health care services. This thinking was coupled with the demand by consumer activists for public accountability of the activities and services of health care professionals. Responding to these demands, Congress passed the Social Security Act of 1965 (Public Law 89-97), which established Medicare.

The enactment of Medicare cast the JCAH into an entirely new role, marking the beginning of JCAH's relationship with the federal government. Under the provisions of the Medicare Act, the Secretary of the Department of Health, Education and Welfare (HEW) was authorized to establish requirements for general, acute-care hospitals as a condition for their participation in the Medicare program. Hospitals participating in the program were required to maintain the level of care that had come to be recognized as the "norm." Specifically cited in the law as the norm were the standards of the Joint Commission, a reference that indicated the confidence of Congress in the ability of the health care sector to voluntarily assess the quality of care being provided in American hospitals.

The Medicare Conditions of Participation, subsequently promulgated and published by the Social Security Administration, reflected the then current (1965) JCAH standards for hospitals. As a result, hospitals accredited by the JCAH were "deemed" by the government to be in compliance with the federal Conditions (except for utilization review and, more recently, institutional planning requirements) and, thus, eligible for participation in Medicare.

Revision and Development of JCAH Standards

After carefully reviewing those standards adopted from the American College of Surgeons, the JCAH made only minor amendments to the standards during its first year of operation. Between 1953 and 1965, the hospital standards underwent revision six separate times.

And yet, despite the several revisions of its hospital standards, the level of care reflected in JCAH's standards by 1965 was recognized as being "minimum essential." Eager to raise this level of care to one that was less than the theoretical ideal but yet was challenging enough to reflect the advancing state of the art, the Board of Commissioners voted, in August, 1966, "to review, reevaluate, and rewrite the hospital accreditation standards and their supplemental interpretations to attain two objectives:

> (1) To raise and strengthen the standards from their present level of minimum essential to the level of optimal achievable and to assure their suitability to the modern state of the art.
>
> (2) To simplify and clarify the language of standards and interpretations to remove all possible ambiguities and misunderstandings."

At about the same time as Medicare was being implemented and early evaluations of the program were being made, concerns developed regarding the level of care required by JCAH's 1965 standards for hospitals. An advisory group to the Social Security Administration questioned whether or not the federal government should be using public monies to reimburse health care providers who were required only to satisfy minimum standards of care, which were cited as the "norm" in the Medicare Conditions of Participation. This question further underscored the necessity for the Joint Commision to raise the level of care required for JCAH accreditation to one of optimal achievable.

The term "optimal achievable" came to be associated with the standards that reflected JCAH's philosophy of voluntarism and professional motivation to seek excellence. During this major revision process, the JCAH drew upon the expertise of hundreds of health care providers and representatives of America's health-oriented professional organizations.

The 1970 edition of JCAH standards, titled for the first time, the *Accreditation Manual for Hospitals*, represented the culmination of these collective efforts. The revision of standards has since become a regular and continuous part of JCAH's accreditation activities, and is one way in which the JCAH has gained considerable credibility.

Since hospital standards are established directly by the Board of Commissioners, the review and revision of standards is the responsibility of the Board's Standards and Survey procedures (SSP) Committee, which is a standing committee of the JCAH's governing body. In the case of the four accreditation councils (to be discussed in the following section), new or revised standards must first be adopted by the respective accreditation council, which applies its own processes for review, revision, and development, and then be submitted to the Board's SSP Committee for ratification.

Each standard is developed as a result of an identifiable need to measure or enhance the quality of a particular aspect of care or service. Input for each standard is solicited from many and varied sources. For example, comments are solicited from specialty organizations and individuals considered to have expertise in the area applicable to the standards under development or revision. In addition, those governmental agencies concerned with promulgating related standards and regulations are sent draft copies of proposed or revised JCAH standards for comment (but not necessarily for concurrence).

Another important source of input consists of the feedback surveyors receive while in the field conducting surveys. Physicians, hospital administrators, individual health care associations and other health care professionals are encouraged to provide input into standards through their respective delegations to the JCAH's Board of commissioners or through direct communication with the staff of JCAH.

In the case of hospital standards, drafts of each section of new or revised standards are distributed to the field for extensive review and comment. Appropriate changes are then incorporated into the draft, and this draft is sent out to the field for review again. Thus, the field has at least two opportunities to provide input into standards under revision or development before a draft is forwarded to the SSP Committee for review. Should the SSP Committee require further changes or study, then JCAH staff amends the draft accordingly. Once the revision process produces a document determined to be satisfactory by the Committee, then the draft is sent to the full Board of Commissioners for final consideration.

Total revision of each section of standards in an accreditation manual is not undertaken all at once for several reasons. In view of the extent of changes required, a completely revised manual would place an unreasonable burden on the hospital or facility in terms of achieving compliance within the required time frame. Further, not all outside expert advice is available for consultation on every section of standards at the same time.

Thus, the JCAH's policy of reviewing and revising sections of standards individually permits development and implementation of high-priority sections without unreasonable delay. This policy also facilitates careful review by the SSP Committee of the Board.

Today JCAH standards are sometimes criticized as having become too stringent and costly. Realistically, the Joint Commission must develop standards that are sufficiently "tough" to keep abreast of the state of the art, apply these standards fairly and equitably, and render decisions on the basis of measurable criteria. Every decision to develop and/or revise any JCAH standard must be made in consideration of some fundamental questions: Is the standard professionally justifiable? Will it result in better health care? How cost-effective will it be?

JCAH Expansion and Corporate Structure

As the Hospital Accreditation Program of the Joint Commission gained widespread acceptance, other sectors of health care and related human services identified with the purposes of the JCAH and declared their own needs to demonstrate and be recognized for similar efforts in the pursuit of excellence in care and performance. Thus, expansion of the JCAH's accreditation activities began in 1966 when long-term care facilities were surveyed by the Hospital Accreditation Program in conjunction with hospital surveys. This activity led to the formation of the Accreditation Council for Long Term Care Facilities in 1971. By that time, other accreditation programs had come under the purview of the JCAH, namely, the Accreditation Council for Mentally Retarded and Other Developmentally Disabled Persons formed in 1969 and the Accreditation Council for Psychiatric Facilities formed in 1970. In 1975, the Accreditation Council for Ambulatory Health Care was formed. Meanwhile, the Accreditation Council for Psychiatric Facilities had established standards and survey procedures applicable to various specialized services in the following five areas: adult psychiatric care, child and adolescent psychiatric care, alcoholism treatment, drug abuse treatment and rehabilitation, and community mental health services.

In addition to offering the services of these nine accreditation programs, the JCAH expanded its educational activities and currently offers professional continuing education programs to health care professionals through its Quality Resource Center. It is estimated that more than 10,000 professionals annually participate in these programs.

Ultimate responsibility for the Joint Commission's activities is held by the Board of Commissioners, which is comprised of appointees from its four parent organizations. Three Commissioners each are appointed by the American College of Surgeons and the American College of Physicians; seven Commissioners each by the American Hospital Association and the American Medical Association. JCAH Commissioners serve for three-year terms without compensation as members of JCAH's governing body and convene three times annually. In addition to attending the three annual meetings of the Board, the Commissioners are assigned to standing committees where most of the detailed work is carried out. Examples of such committees include the Standards and Survey Procedures Committee, which meets three times a year, and the Accreditation Committee, which meets every month, as well as other basic working committees.

While the activities of the Joint Commission expanded and grew more complex, so did its corporate structure. Whereas the policies and procedures of the Hospital Accreditation Program are directly mandated by the JCAH's Board of Commissioners, each accreditation council bears responsibility, under the aegis of the Board, for developing its own standards and conducting its own accreditation survey programs.

Although the accreditation councils operate under the auspices of the Board of Commissioners, each is composed of appointees of national organizations concerned with the respective specialized area of care. The diversity of interest in JCAH accreditation activities is demonstrated by the current participation of 27 national health care organizations in one or more of its accreditation programs.

Both the revision of its standards and the expansion of its scope of accreditation activities have constituted efforts on the part of the Joint Commission to be responsive to the needs of the field, to be in concert with the state of the art of modern medicine, and to achieve accountability to the public. These efforts are the core of the JCAH's activities, assisted by more than 350 people (including field staff) and a $15-million budget.

HEW Validation Surveys

The position into which the JCAH has been placed as a result of Medicare legislation and its provision for deemed status is similar to that of a "middleman" between government and the health care profession. It is true that the federal government, in effect, placed its confidence in the voluntary accreditation activities of a private organization created by and comprised of health care professionals. But, this was soon to be challenged by consumer representatives. Subsequently, a federal system of monitoring JCAH accreditation activities was established.

In 1970, a consumer group filed suit against the Secretary of HEW and the Joint Commission. The group contended that the authority conferred on the Secretary to use JCAH accreditation as an index for compliance with Medicare's Conditions of Participation was an unconstitutional delegation of authority to a private agency. The suit was rendered moot by the subsequent passage of the 1972 Social Security Amendments (Public Law 92-603), which provided for "validation surveys" of JCAH-accredited hospitals. This meant that, while JCAH-accredited hospitals continued to be deemed eligible for participation in Medicare, the Secretary of HEW was authorized to validate JCAH findings. The purpose of such validation surveys was to determine if indeed JCAH accreditation was a reliable index for Medicare certification. Also, whereas the original Medicare Act precluded the Secretary from setting "higher" than comparable JCAH standards, the Secretary was now authorized to do so when necessary

The Joint Commission is, essentially in agreement with the concept of validation of its accreditation decisions. As understood by the JCAH, the intent of Congress was to validate the JCAH accreditation decision by determining if the JCAH, using its standards and survey procedures, arrived at the same conclusions as the state agency would have had the state agency conducted its routine Medicare certification survey.

Though some circumstances surrounding validation surveys have changed in the past five years, the initial problems have not. There are problems inherent in attempting to validate the results of one process by using methods applicable to another process. The Medicare standards and survey procedures used for validation and those of the JCAH were, and still are, so disparate and differently applied as to preclude an objective, scientific comparison of the results of the respective surveys. In addition to differences in survey team composition, the same criteria are not being used by both parties. JCAH uses 23 sections of standards developed by health care professionals covering all aspects of a hospital's operation while HEW uses as its criteria the Medicare Conditions of Participation, which emphasize environmental conditions. Also, the JCAH's concept of substantial compliance relative to its standards is in sharp contrast to HEW's literal compliance or checklist approach to every item in its guidebooks.

What the validation surveys have accomplished amidst all the problems encountered is to confirm the fact that the Joint Commission indeed embraces the total spectrum of health care delivery, its prime concern being the quality of health care services offered to the patient.

Current Status of JCAH Governmental Relations

The criticism is often heard that the JCAH has become a quasi-governmental organization serving as an agent of the government. While this assumption is understandable, it is incorrect since the JCAH was created out of the concern for those receiving health care services and works most closely with the institutions and individuals providing such services.

The JCAH does have a relationship with the government. It can be described as one of cooperation that in no way compromises the goals of the Joint Commission. The JCAH must recognize the needs of government while maintaining a dialogue with it so as to integrate governmental demands with the realities of health-care providers. Increasingly, government is turning to the voluntary sector of health care for leadership in establishing standards and survey procedures for the improvement of health care services. The Joint Commission is responding by maintaining a healthy working relationship with government on behalf of health care professionals and the American patient.

Conclusion

There are many challenges facing the Joint Commission today. How can the JCAH develop and revise accreditation standards that are both professionally justifiable and cost effective? How can costs be contained when accreditation standards and governmental regulations are requiring greater compliance in virtually every aspect of a hospital's operation? How can duplication of efforts be avoided relative to JCAH accreditation surveys and government's certification and licensure surveys?

For more than 25 years, the Joint Commission has confronted its challenges and been recognized, as a result of its professional stature and reputation, as a dynamic, progressive organization leading the voluntary sector's quality assurance activities. As President of the Joint Commission and a health care professional, I sincerely believe that there is a continuing place in our world for an important contribution from the voluntary sector in the area of accreditation. If support for and recognition of the true nature and potential of the Joint Commission on Accreditation of Hospitals remains strong, then the voluntary approach to quality assurance will survive.

Scientific Test Proves Generic Drugs not Equal

Once again a scientific research project has shown that different brands of the same drug do not always produce the same results in individual patients.

A research group at the Medical College of Virginia tested two different brands of tetracycline. Each was a dose of 250 milligrams. One was packaged in a capsule and the other in a tablet. They had been certified as producing identical results by the Food and Drug Administration.

In a report in the May 5 *Journal of the American Medical Association,* Dr. John H. Wood and colleagues declare that the tablet purchased from the lowest bidder was inferior to the more expensive capsule product in raising blood and urine levels of the potent antibiotic in test volunteers.

The two were not the same, and a physician prescribing by generic name only would not know whether or not his patient has received the more beneficial drug.

The use of 250 milligrams four times a day is a standard dosage that should provide high enough levels of the antibiotic in the blood to cope with most infections. Tetracycline is the best drug for rickettsial infections and may be the best alternate drug for treatment of microplasma and gonococcal infections, says Dr. Wood.

But, if the physician writes a prescription for simply tetracycline, rather than specifying the brand packaged in the capsule, the patient may not gain sufficient protection to overcome the infection, he says.

"Present batch certification (by the FDA) of tetracycline tablets does not ensure equivalency in performance relative to the innovator capsule product," he declares.

In an accompanying editorial, Louis Lasagna, M.D., of the University of Rochester School of Medicine and Dentistry, Rochester, N.Y., declares:

"Politicians, consumers, and third-party payers are all interested in saving money on drugs, although drug costs represent only 10 percent of the national health bill.

"Passions run high about generic substitution. The debate has not been helped by two flimflams perpetrated on the public—the notion that generic prescribing invariably leads to savings for the consumer, and the readiness with which everyone ignores the importance of the pharmacist in determining prescription prices.

"It is a cruel hoax on the sick, rich or poor, to save money at the expense of good greatment. It is appalling to find proponents of substitution bills and the maximum allowable cost plan so shamefully ready to give assurances to the public about interchangeability of generic and brand versions that no knowledgeable scientist in his right mind would give.

"The article by Wood et al. is the latest scientific study to show how pathetically misplaced our faith can be in regard to marketed drugs. Their paper correctly concludes that the tetracyclines tested are not interchangeable and that present batch certification of antibiotics by the FDA cannot ensure equivalency of performance.

"The lesson is obvious, but will the politicians and bureaucrats be guided by scientific fact or by cynical political and economic expediency? The public deserves candor and straight talk. Cheap drugs are not necessarily good medicine."

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Unnecessary Surgery: How To Create It

KARL D. PFUETZE, M.D.

The most remarkable error in the Moss Subcommittee hearings on unnecessary surgery is the assertion that 17 per cent of all surgery performed in the United States is "unnecessary." That figure came from a single study by Dr. Eugene McCarthy. He had been requested to help control rising medical costs of two labor unions in New York City. He established a program that required all patients who had been advised by their personal physician to have an operation to get a second opinion from a preselected consultant or the union would not pay for the operation. The Moss Subcommittee staff chose to believe the frequency of differences of opinion between the first physician and the second physician was somehow a measure of truly unnecessary surgery and could be extrapolated nationwide as an estimate of the cost in dollars and lives lost due to "unnecessary" surgery. The subcommittee report contains many erroneous calculations and assumptions. It is only necessary, however, to understand one of these errors to see why its estimate of unnecessary surgery is inflated by several hundred percent.

When making any kind of scientific measurement, it is necessary to understand the limitations of one's method of measurement and the mathematical implications of one's experimental design. The importance of understanding the methodology selected to measure a particular phenomena can be readily understood in the following example. If you wish to determine the shape of the earth and choose to trust your first impression, you can look out the window at the horizon and see the earth is obviously flat. If, however, you have some understanding of the limitations of your method, you will not trust your first impression. More sophisticated methods of course show the earth to be round.

Let us now consider the mathematical implications of the design of the McCarthy study. The first impression of an untrained observer is that the study measured something—certainly differences of opinion, possibly unnecessary surgery. On closer examination, however, it can be demonstrated that the McCarthy study is not a measure of unnecessary surgery. Rather, the study is a mathematical, medical "Catch 22." The inherent design of the study will automatically produce results which falsely imply that even the best surgeons are performing "unnecessary" surgery. To understand this medical "Catch 22," consider the following situation:

If you were a surgeon who wanted to avoid *ever* being accused of performing an unnecessary operation, you might resort to the extreme precaution of sending every patient on whom you felt an operation was necessary to five other highly regarded consultants before making a decision to operate. You might establish the requirement that you would never operate unless four out of five consultants agreed with you on each case. Assume then that you have one hundred patients with only one dissenting opinion out of five on each case. It would be difficult to accuse you of doing *any* unnecessary operations on those patients. However, consider what happens to your reputation as a surgeon when these same patients and your surgical judgment is evaluated using the design of the McCarthy study. If you send each of the one hundred patients to only *one* of the five consultants at random, the laws of probability predict that one out of five of your patients will encounter the particular physician who disagreed with you on that particular case. Using the design of the McCarthy study and the assumption of the Moss Subcommittee (a difference of opinion equals an "unnecessary" operation), you will suddenly be accused of performing twenty per cent "unnecessary" surgery. Even if nine out of ten consultants agreed with you on each of one hundred patients, you would be accused of ten per cent unnecessary surgery using the design of the McCarthy study. Consider the scandalous consequences if two out of five consultants disagreed with you. In that situation there would be four votes for surgery (including your own) and two votes against surgery. That is a two-thirds majority—enough to pass an amendment to the United States constitution.

KARL D. PFUETZE, M.D., Cardiologist, Mission, Kansas.

However, utilizing the design of the McCarthy study, you would be accused of performing forty per cent unnecessary surgery! I think it can be seen that the Moss Subcommittee staff chose to evaluate surgical practice using a method which is in fact a medical "Catch 22."

The design of the McCarthy study elevates to a position of apparent equal credibility for a given patient a minority opinion which would not be confirmed by the majority of well trained physicians. For the purposes of their calculations, the subcommittee staff bestowed upon the differing minority opinion the mantle of infallibility and thereby labeled those operations as distinctly "unnecessary." In this manner the Moss Subcommittee staff was able to produce its seventeen per cent value and display it as a measure of unnecessary surgery.

From a scientific point of view, the rather mind-boggling methodological error in the McCarthy study can be stated as follows: Dr. McCarthy confused the inherent variability in his method of measurement with the act of making a measurement.

If one is determined to use the method of differences of opinion to evaluate quality of care or to evaluate the impact of the fee for service mechanism on frequency of surgery, one must first determine the frequency of differences of opinion which occur between outstanding physicians receiving a fixed salary. This value would represent the minimal achievable level of differences of opinion and would reflect the inherent variability in the practice of medicine. Levels of difference of opinion exceeding this basal level might reflect factors such as the fee for service mechanism. A variety of studies have shown that there is a frequency of differences of opinion averaging around fifteen per cent for most clinical decisions,[1 2 3 4] including such supposedly precise activities as reading coronary arteriograms. By ignoring the above phenomena, Dr. McCarthy and Congressman Moss were able to publicize rather sensational data which was grossly overstated. Instead of seventeen per cent unnecessary surgery, two per cent would be a more accurate value (17% minus 15% equals 2%).

It is disappointing to see an experienced investigator like Dr. McCarthy make this kind of error. It may reflect the fact that he is not a clinician and had little or no personal experience with clinical, and especially surgical, decision making. For Dr. McCarthy to publish a paper on surgical decision-making is not unlike a celibate doing a study on sexual experiences. You don't have to question his intellect or motives in order to honestly wonder if he has a realistic understanding of his subject matter.

In conclusion, there is an intriguing study regarding surgery performed on physicians which has not been publicized by the Moss Subcommittee but is certainly pertinent. One of the fundamental assumptions underlying the Moss Subcommittee hearings is that if patients were truly knowledgeable as consumers of surgical care, they would frequently turn down operations which were not, in fact, truly necessary. J.P. Bunker[5] wondered how much less surgery would be performed on knowledgeable consumers of surgical care. He felt he could shed light on this question by determining how often physicians allow themselves, their wives and their children to be operated on. Dr. Bunker has stated he was sure when he started the study that physicians, being as knowledgeable as they are about the unpredictable and potentially tragic complications of surgery as well as being familiar with their colleagues' very human weaknesses of character and skill, would certainly not submit to an operation unless they were convinced that the benefits to them or their wives and children would exceed the risks, suffering, and expense. He felt that as a group, physicians were the most knowledgeable consumers of surgical care he could identify. He compared the incidence of surgery performed on physicians with businessmen, lawyers, ministers, the rest of the country and Britain.

As it turns out, physicians, their wives and children have more operations performed on them, per person, than other socio-economic groups. This is true for all types of operations and not just minor or cosmetic operations. Female physicians have a higher frequency of hysterectomy than the rest of the women in the country. Wives of physicians have an even higher frequency of hysterectomy than female physicians. How can the amount of unnecessary surgery in this country be anywhere close to the claims of the Moss Subcommittee if physicians themselves, as informed consumers of surgical care, have a higher frequency of surgery than the rest of the population.

I hope this article will give you an idea of the kind of information that has not been given public exposure by the Moss Subcommittee. There is other information of a similar nature that could be presented. I believe the American people would be intrigued by what they have not heard on this important subject.

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NIDR Scientists Develop New Strain of Bacteria

A new "disarmed" strain of bacteria has been developed. It should help allay the fear that scientists transplanting genetic material from viruses and higher organisms to bacteria might accidentally release a dangerous new organism into an unsuspecting world.

In work partially supported by the National Institute of Dental Research, Dr. Roy Curtiss, III, of the University of Alabama's Institute of Dental Research has succeeded in generating an organism which cannot survive in nature but can facilitate the study of "recombinant DNA." DNA is a very long molecule that contains the code for the production of specific proteins by any normal cell.

Today scientists have developed techniques for making new combinations of DNA molecules in the test tube, and this will eventually enable them to modify bacteria so that these cells can make enzymes now found only in animals or higher plants. Thus bacteria might supply a congenitally missing enzyme for a child who cannot digest milk. This mixing of genes across previously impenetrable barriers to hybridization is the basis of future recombinant DNA research.

Dr. Curtiss chose the K-12 strain of *Escherichia coli* as the parent organism because in the 55 years since it was isolated from a human it has been thoroughly studied, and is now less vigorous and more attenuated than wild *E. coli* which survives in soil, thrives in sewage, and normally inhabits human and animal intestines. With the help of eight colleagues, in the short course of about a year Dr. Curtiss has incorporated 15 different mutations into descendants of K-12. Now, after several more months of testing, they believe that they have developed a very safe strain that they call Chi 1776.

To make Chi 1776 useful for recombinant studies, they made sure that it has no machinery to "restrict" or prevent foreign DNA from entering. The strain was also engineered to be fairly easy to "transform." This means that Chi 1776 not only accepts foreign DNA, but will aid in its replication even when the DNA has entered the cell in the form of a plasmid separate from the single bacterial chromosome.

Plasmids are small circular molecules of DNA. They are rarely essential for the life of the cell, and multiply within bacteria independently of the chromosome.

Another useful modification of Chi 1776 is that it readily produces mini-cells. These are small buds of protoplasm that separate from the main cell. They contain just enough cell machinery to allow plasmids with new kinds of DNA to make new proteins which can thus be recovered in a relatively pure form separate from most of the other cell proteins.

Moreover, Chi 1776 is so sensitive to detergents that its walls are easy to disintegrate or lyse. This property makes it simpler to retrieve any new compounds that it may develop.

Sensitivity to detergents also makes living in today's sewage most improbable for Chi 1776. Another barrier that Dr. Curtiss imposed is sensitivity to bile salts. This trait prevents the bacterium from living in intestines. He has fed rats concentrated solutions of the Chi 1776 through stomach tubes, and never retrieved a single one from their feces. The inability of the new organism to synthesize colonic acid, an essential component of the outer capsule that protects many enteric bacteria from digestion, is still another imposed barrier to its normal life.

Moreover, Chi 1776 cannot make DAP (diaminopimelic acid), a necessary constituent of the rigid walls synthesized by most other Gram-negative bacteria. In nature, free DAP is scarce and in its absence Chi 1776 soon outgrows its cell wall and bursts.

Another handicap that Dr. Curtiss has introduced is sensitivity to sunlight. When its DNA is damaged by ultraviolet light, Chi 1776 cannot make repairs either in the dark or in visible light. Since sunlight contains ultraviolet rays, the organism would die in the air or on the ground.

Although thymidine is necessary to make DNA, Chi 1776 is dependent on the culture medium for this essential material. Dr. Curtiss notes that in nature there is little free thymidine, and when it is not provided by a bacteriologist, Chi 1776 tries to grow by using its own DNA as a source of thymidine, and thus destroys itself.

Many bacteria look like Chi 1776, and to prevent inadvertent contamination of experimental cultures with a wild-type organism that might live outside the laboratory after it had acquired some new, unwanted DNA, Dr. Curtiss has introduced two genes unknown in plasmids and very rare in wild-type *E. coli.* These genes give Chi 1776 resistance to nalidixic acid and to cycloserine, chemicals which kill most bacteria. To avoid mistakes, these chemicals are added to the

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News and Features from National Institute of Health.

culture medium before recombinant experiments are conducted.

There are other bars to the creation of unwanted, viable strains. Chi 1776 is resistant to most of the bacteriophages or viruses which can introduce foreign DNA into the parent K-12 strain. Also Chi 1776 seems unable to receive the types of plasmids which in K-12 enable the parent to conjugate and exchange DNA through a connecting tube. These barriers reduce to an infinitesimal chance the likelihood that Chi 1776 could escape, and before dying, pass on its recombined DNA to a robust organism encountered in nature.

This research will be reported in the *Proceedings of the Tenth Miles Symposium,* 1977. Collaborating with Dr. Curtiss in the development of this organism which has now been certified by NIH as suitable for certain types of recombinant research, are Dennis Pereira, B.S., Charles Hsu, Ph.D., Josephine Clark, Ph.D., Raul Goldschmidt, Ph.D., Robert Moody, M.S., Matsuhisa Inoue, Ph.D., Larry Maturin, M.S., and Sheila Hull, Ph.D., who are continuing research to make Chi 1776 as fail-safe as possible.

Note: Circular DNA can now be opened with an enzyme which leaves the ends sticky. Specific portions of DNA may then be added or subtracted, and the circle closed with another enzyme. There are several methods of introducing foreign DNA into cells so that the cell will begin to make new proteins according to the directions encoded in the DNA. Most of this research is being done with the circular molecules of bacteria and plasmids. However, it is now possible to break down the membranes which surround chromosomal DNA in higher life forms. This molecule, shaped like a spiral ladder, can also be separated into fragments with sticky ends and spliced on to the bacterial DNA. Detergent chemicals that destroy membranes have aided the joining of DNA from higher forms with nuclei to that of bacteria which lack nuclei.

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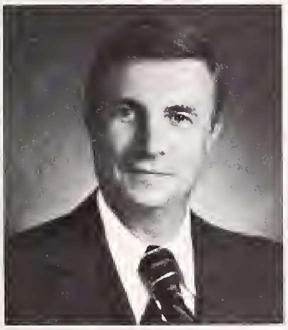
The President's Page

FTC Suit: Implications beyond Advertising



Repeated conversations indicate many of us still believe the FTC suit to be primarily about advertising. But it also concerns allegations of the profession's limitation of competition, restriction of the supply of physicians, interference with HMO development and fixing of fees.

Medicine does not forbid advertising but rather the solicitation of patients which is defined as the obtaining of patients or patronage by persuasion or influence. If we were not conversant with the fakery, quackery and proprietary medical diploma mills leading to the Flexner Report and subsequent reforms then the more recent Krebiozen and Laetrile episodes and premature media reporting of medical research could give us good enough reason to believe the sick fall easy prey to nostrums, easy solutions, quackery and to glib reportage. Nor should we forget the self-laudatory advertising that masquerades under the guise of news reporting on too frequent occasions.

We do indeed restrict competition by setting standards in the education of physicians and for specialty training programs and Board Certification. Does the FTC suggest an alternative to passing examinations with its implication that some fail? Really, who else but the profession can or should guarantee the minimum standards of excellence of its members to society. I do not exclude the public which has legitimate interests, however. Cut-rate training and second-rate quality would not likely benefit the patient. One should note many of the same righteous voices complaining of "physician shortages" not long ago now complain of "oversupply" because the annual production of physicians has been doubled in the past ten years in response to those earlier complaints.

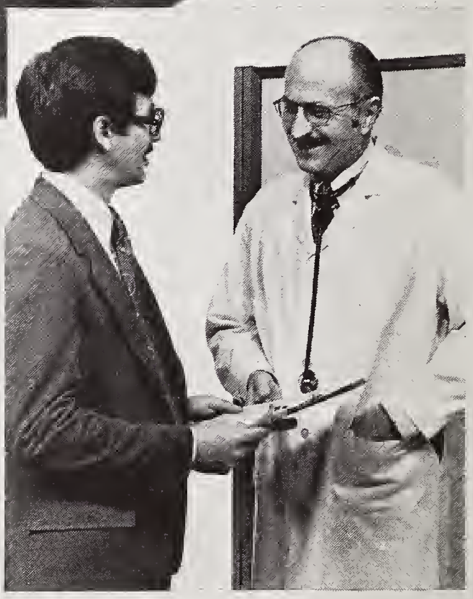
The FTC alleges solo practitioners collude to hurt the HMO movement. But there is proof that HMO's deliver care more cheaply and proof they don't. Clearly, on the one hand they must accept high risk clients the private insurers can refuse but on the other, they are financially aided with public funds while their competition is not. The "market place" disturbed by previous meddling is to be reformed by more of the same. I know we in Connecticut have not colluded to have the development of HMO's and in fact are developing our own in the Independent Practice Association (IPA) mode.

As to fixing fees, it is alleged that Relative Value Guides (RVG) are used by us to raise fees. In fact RVG's are degrees of difficulty of services and procedures. They have no monetary worth unless dollar conversion factors are used. They can be used to lower as easily as to raise fees. What is mind-boggling is that private and governmental institutions use them to fix fees and construct schedules while individual physicians are warned it is immoral and improper if they use them.

The thrust of the FTC actions is to have medicine and the professions in general regulated as businesses. While a business serves its own interests, a profession serves the good and welfare of its clients as well. Should commercial advertising destroy competition, it is considered effective, unusually so, but not illegal. What should we think of professional advertising doing the same? How would the damage done be remedied? Perhaps with more litigation and we are already a too litigious society by far. If medicine is ruled to be a business, no profession will escape a similar fate I am sure.

As we await the FTC's administrative law judge's decision and the almost certain progression to the Federal Courts, we should all be knowledgeable, for each of us must be the educator of our friends and acquaintances, otherwise the matter may be dismissed by the public as parochial and of little importance. Actually, it is a matter of grave potential impact to the fabric of our society and the interrelations of many of its most important elements, i.e., the government, the public, and the still independent and learned professions.

Jerome K. Freedman, M.D.
President



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Reflections from the Dean's Office

Bureaucrats Inside and Out

ROBERT U. MASSEY, M.D.

Jacques Barzun, in his book *The American University*, has given a better account than most authors of the problems faced by the modern academic administrator.

"Besides making headway, the administrator's constant aim must be: *simplification*—for the same reason that the householder mows his lawn and prunes his trees. The task is harder in a university because every twig resists cutting, and even inanimate *forms* find defenders."[1]

Complexity grows in human society apparently without checks on its exuberance. Where resources are plentiful, complications and entanglements grow rank and the energy which should go to make headway is spent in cutting away the encircling vines. When resources wane, the laws of complication continue to use up money, people, space, and time, but some in the group, sensing danger, pitch in and help for a while with the pruning and trimming.

Mansanao Toda in his essay *The Need for a Science of Civilization* formulated "the not-yet-famous second law of civilization dynamics: in an isolated human system. The negative entropy it contains has a tendency to increase." He added "God knows what the first law is."[2]

The bureaucracy has been society's, and the university's, way of regulating disorder and uncontrolled growth, but the bureaucracy, set up only to manage so that others might produce, is subject to Toda's second law. Its growth is even more vigorous since there are few external controls to restrain it. Analogies to weeds and neoplasia spring to mind, but these must not be carried too far. Cancer has no redeeming quality, whereas bureaucracy is probably essential in all but the simplest of organizations. I suspect that Hippocrates exercised management and control even under the plane tree at Cos; and among the disciples there was one who accepted the task of managing fiscal affairs, though it ended in his undoing.

Since the Middle Ages when the first European universities began, these communities of scholars have frustrated most efforts to make them orderly and efficient. The northern universities at Paris, Oxford, and Cambridge were controlled by the faculties under the general guidance of the church. The great Italian schools were run by and for the students. At Padua the office of rector was a short-lived and expensive honor which, I suspect, was not always accepted with a light and joyful heart.

Until the reforms of 1849, the medical faculty of the University of Vienna was ruled by the faculty director who was the Emperor's first physician, rarely an academician and often a despot. The dean was elected annually and could succeed himself twice, unless the director found him unusually compliant. In that case there might be no election for years.

Before the second World War, American medical schools were managed by the dean's secretary, with oversight by the dean whenever he was free from clinical or teaching commitments. A quarterly meeting of senior faculty served to deal with the rare policy decision, and to assure that the academic programs had reasonable coherence.

In the thirty years since the war, medical schools and their teaching hospitals have turned into academic health centers often with complex affiliations and vast patient care responsibilities; government has become, in Barzun's words, the "man who stayed for dinner," and science has become "big science," transcending institutional walls. Students of management have found neither what is or ought to be the pattern of governance for these academic behemoths. Goals are multiple, difficult to define, and frequently conflicting. The proper style of management is believed by the faculty to be academic, by hospital and industrial affiliates to be corporate, and by local government to be political. Academic administrators have difficulty keeping their roles sorted out, sometimes playing the politician or corporate executive in front of the faculty when what is wanted is academic leadership and support of the important work of the university.

Here *equity* is the goal, and the means should be continuously reformed to achieve simplicity. As resources decline the quality of scholarship and clinical work must be protected from the institutional bureaucracies which, through no fault of their own, so often act as though the enterprise would run more smoothly if only the students, patients, and faculty would go away.

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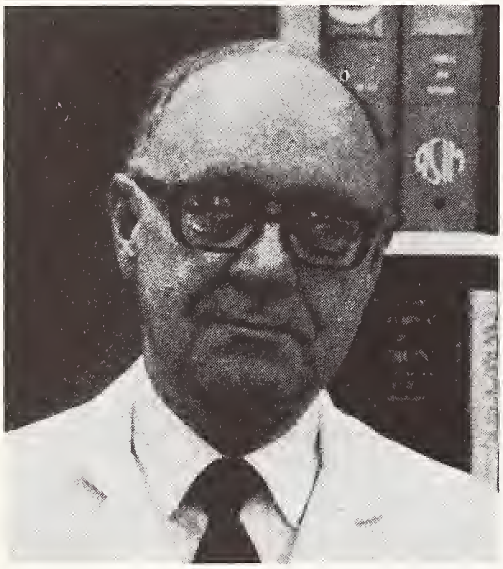
ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut School of Medicine, Farmington.

“THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY.”

—Dr. William Felts, Past President,
American Society of Internal Medicine



More and more physicians today are beginning to realize the extent of the economic influence they have, and are finding ways of holding costs down.

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What else are physicians doing? Minimizing their patients’ hospital stays, whenever possible. Reevaluating routine admissions procedures. Questioning the real need of the diagnostic tests they order for their patients. Avoiding duplicate testing. Trying to discourage their patients’ demands for unnecessary medication, treatment or hospitalization. Compiling daily logs of their medical decisions and what they cost. And more.

More physicians today realize what a tough problem we’re all faced with. They know this is a challenge for medicine. And that physicians are in the best position to deal with and solve the problem.

**PATIENT CARE Magazine—Outlook 1977, “Face-Off: Cost Containment vs. Chaos,” January 1, 1977.*

Lyle CB, et al. “Practice habits in a group of eight internists,” ANNALS OF INTERNAL MEDICINE 84 (May 1976), 594-601.

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Connecticut Medicine

The Journal of the Connecticut State Medical Society
160 St. Ronan Street, New Haven, CT 06511

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EDITORIALS

The Patient Seized This Morning

Language evolves; new words and expression, meanings and spellings appear, as well they should. Yet the evolution of words ought to be a leisurely process, permitting the polish of time. Sudden intrusions and incursions from drug and rock and revolt and space and sloth subcultures have sent our language reeling and retreating to the haven of texts seldom opened and deliberately ignored by educators who have left and leave choice of curriculum to students more interested in the sword than the pen.

I learned to speak with vocal inflections the equivalent of punctuation marks. No longer done. No need to stress a word or phrase. "You know" and "like" are the utile words that stand in place of periods, commas, colons whole and semi, and exclamation marks. "You know" seems presumptive to me; one day I will have the courage to ask why it is necessary to tell me if, indeed, I do know.

I am bothered by the abbreviations that abound and must stop to fathom meaning. The D of PND might well stand for dyspareunia; we do recognize other than cardiac causes for dyspnea.

Parts of speech change. A short time ago bleed was a verb, transitive or intransitive. Its use as a noun was restricted to the excess of a photograph or diagram too large for the printed page. Thomas Hardy spoke of the bleed of a decaying civilization. Perhaps his use approaches that in the patient who was admitted with "his 3rd bleed." "With his 3rd bleeding episode" sounds stilted even to me. Much more convenient to shorten the participle and change the verb to a noun. Yet, whenever I hear the phrase "with his bleed," I imagine a hapless patient bearing a bloody bucket, begging to be relieved of his burden.

Shortening of words constitutes another form of abbreviation, often coupled with change in part of speech. Example? "Bronched." The noun bronchoscope has been shortened and converted to the verb "bronch" used either actively or passively. "I bronched the patient." "The patient was bronched." I know I should have visions of a tube traveling through the tracheobronchial tree but my mind will have none of that truncated word. Instead, I see a dusty arena with a handsome stallion trampling an inert form clad in ten gallon hat, leather vest, chaps and spurs. The bucking bronco has triumphed again.

Strange, new phrases appear. "The patient seized this morning." I am confused and think of a darkened plain lit only by a single shaft of light shining down on an Atlas-like figure who clasps diaphanously-clad Aurora to his breast. The Morning Goddess, trapped in the villain's embrace, struggles vainly to set daylight loose upon the land until, with a shake of my head, I see a poor, convulsing soul writhing on the floor.

Be of good cheer, help is on its way. The president of Yale has announced that English will again be part of a compulsory core curriculum. Harvard, of course, will follow. More important, the New York State Board of Regents has decreed that ninth grade reading skills will soon be required for high school graduation.

Solomon S. Schwartz, M.D.

Department of Radiology
The Hospital of St. Raphael

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Letters to the Editor

Letters to the Editor are welcomed and will be published, if found suitable, as space permits. Like other material submitted for publication, they must be typewritten *double spaced* (including references), must not exceed 1½ pages in length and will be subject to editing and possible abridgment.

ABOUT HOMOSEXUALISM

To the Editor: I just recently came across the February issue of *Connecticut Medicine* which included an article and editorial concerning the subject of homosexuality. I believe that Dr. Hunt's article has some problems in its presentation; however, I particularly take issue with the editorial by Dr. Fleck.

I find Dr. Fleck's comments on homosexuality to utilize the same old arguments used to perpetuate homosexual stereotypes and discrimination. If I interpret correctly what he says, he is suggesting that if homosexuals keep their sexual lives private there would be no problems (for whom?). He is really suggesting that if they keep their life style hidden then there would be no problems for a large segment of the heterosexual population. This is a double standard for heterosexuals and homosexuals. The sex lives of heterosexuals are in no way private. Marriage or children in a family indicates many things about an individual including that he or she has heterosexual relationships. Gay individuals are not free to say that they are dating someone, have a lover, or to indicate that they belong to a gay organization because they are "flaunting" their sexuality. They are constantly in a double bind. If they say nothing about their life style they are subject to continued discrimination, jokes, labelled as submissive, passive, sick individuals, etc. If they say they are gay, challenge the stereotypes, or oppose the discrimination then they are labelled as "flaunting" their sexuality.

The matter of sexual choice is also mentioned and the implication made that homosexuality is an irresponsible choice and that in fact homosexuals have a choice in their sexual preference. First of all it is unclear as to the degree of choice that anyone has in sexual preference. Many homosexuals report that they have no choice in sexual preference. For those individuals who do feel that they have a choice, I believe you would find 100% agreement that homosexuality is as valid and responsible a choice as heterosexuality.

I believe that Dr. Fleck's editorial is subtly and sometimes openly biased and is not in keeping with the American Psychiatric Association position on homosexuality and discrimination against homosexuals. I would suggest that the Connecticut State Medical Society consult with gay physicians and that the Society rid itself of the discriminatory homophobic attitude displayed in this editorial. It is most important that physicians recognize their own prejudices against minority groups and that these prejudices not be fostered or supported by organized medical groups such as the Connecticut State Medical Society.

If the C.S.M.S. has no gay consultant physicians available to them, then I can recommend a large organization of gay physicians in San Francisco whose members would be pleased to provide consulting services on gay issues. I would gladly put you in touch with the appropriate persons on request.

James Krajeski, M.D.

San Francisco, Calif.

The above letter was referred to Dr. Fleck, who offers the following reply:

To the Editor: Your letter to Dr. Fred Fabro, the Editor of *Connecticut Medicine,* arrived at my office because it was addressed to me.

You are correct in interpreting my comments that I believe that homosexuals, like other people, ought to keep their sexual lives and interests private to be shared only or primarily with their sexual partners or with professional people from whom they might seek help. While children indeed are evidence of sexual activity which is usually presumed if two people of either sex live together—this remains a presumption and not a public assertion of sexual activity. Even as couples may become parents, they are not necessarily broadcasting whether or not they are, or both, or either of them, the biologic parents, although admittedly that is usually the case.

My comments are openly biased and are my opinions expressed in an editorial, and my opinions may or may not be at variance with pronouncements of the American Psychiatric Association on any subject whatsoever.

Whatever my editorial may convey, it is in no way representative of any collective or official opinion of the Society, which to the best of my knowledge, has no collective let alone official opinion on the topic one way or another. It is your privilege to consider my remarks "homophobic and discriminatory," however, my opinions happen to be based on a reasonable amount of clinical experience including, if you wish, "consulting" with homosexual individuals.

Thanking you for your interest, I am

Stephen Fleck, M.D.

New Haven, CT

EDITOR'S NOTE: Neither signed editorials nor articles reflect a policy of the C.S.M.S. nor does the Society have a policy on homosexuality.

Hospital Costs and the Minimum Wage

Congress recently voted to raise the minimum wage from the present $2.30 an hour to $2.65 on January 1, 1979. In 1981, it will automatically go up to $3.35 an hour.

The $3.35 minimum wage will mean increased hospital costs of $35.5 million a day, $12.97 billion a year—almost $34 per patient per day.

Many other employers will try to use machines to replace people, but labor-intensive hospitals will have no choice but to pass on these increased costs to their patients. When the basic wage rate is increased, everyone on the payroll gets the same percentage increase.

Whenever a cap is discussed or a bill introduced, the question arises whether or not to include employees' wages under such a cap. Unions want hospital employees to be exempt. If so, who pays? Some of these costs can be passed along to patients, to insurers, and to other third-party payers, but hospitals will have to pay for some of the increases.

So a Federal law to raise the minimum wage, seen as a humanitarian law, hits hospitals particularly, especially at a time when hospital costs are such a national concern.

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Council Meeting

Thursday, September 28, 1978

Attendance

Present were: Drs. Freedman, Kamens, James, Backhus, Ragland, Jr., Friedberg, Hess, Bradley, Fabro, Canzonetti, Cramer, Van Syckle, McGarry, Sadowski, Anderson, Magram, Eslami, Krinsky, Zlotsky, Jameson, Rosenthal, Shenker, Parrella, Sonnen and Shepard.

Also present: Mr. Tomat (FCMA), Mrs. Lindquist, Mr. Sweeney, Mr. Brunell and Mr. Norbeck.

Absent were: Drs. Spitz, Whalen, E. Beck, Horrax, Harkins, Tierney and Barrett.

Approval of Minutes

It was VOTED to approve the minutes of the meeting of August 2, 1978, as distributed.

Subcommittee on Administrative Organization and Planning

It was VOTED that the report of the Subcommittee on Administrative Organization and Planning, which was presented and accepted by the Council on August 2, 1978, be transmitted to Presidents and Secretaries of the county medical associations and to the members of all CSMS committees for their review and study and informing them that the report is being presented to the House of Delegates for approval on November 16.

Resignations—E. Tremain Bradley, M.D., New Canaan

It was VOTED to accept, with regret, the resignation of Dr. Bradley as Chairman and member of the Judicial Committee, member of the Cancer Coordinating Committee, and as CSMS representative to the Cancer Consortium. Dr. Bradley, who has retired from practice, will be spending a great deal of his time in Florida. It was VOTED to appoint Stuart Ragland, Jr., M.D., Colebrook, a member of the Judicial Committee, to be the chairman of subject committee. It was further VOTED to appoint Robert E. Sax, M.D., Bridgeport, as the Society's representative on the Cancer Consortium. The matter of filling the vacancies on the Cancer Coordinating Committee and the Judicial Committee will be considered at the next meeting of the Council.

HEW's National Second Opinion Program

The Chairman of the Council and the President of the Society gave brief reports updating the Council as to the status of the second-opinion program and the meeting held with HEW officials on September 6. The Ad Hoc Committee made the following recommendation to the Council, "That the proposed HEW Second Opinion Program was satisfactory enough to warrant Council reconsideration of its previous stand. . . . " It was VOTED to reconsider the Council's previous action taken on August 2.

It was further VOTED to approve the following motion and transmit it to the House of Delegates on November 16 for consideration, "That the CSMS reiterate its support of the concept of a second opinion but feels that the HEW Second Opinion Program is an ineffective program because it does not mandate the retention of important information necessary for a fair evaluation and follow-up. The CSMS will not oppose the HEW program as such, but believes that it is merely a superfluous duplication of what already is in place and will result as well in the waste of taxpayer monies."

It was also VOTED that the action taken by the Council be transmitted to the Presidents and Secretaries of the County Associations and all PSRO's and also informing them that the subject of second-opinion was being referred to the House of Delegates for consideration.

President's Report

President Freedman reported on his activities and meetings since the last Council meeting which included a lunch with Health Commissioner Lloyd, a conference with Governor Grasso and HEW Secretary Joseph Califano, and his attendance at meetings of the Hartford County Medical Association Board of Governors and the AMA Council on Legislation. Dr. Freedman also apprised the Council that he would be participating on a panel at the forthcoming AMA Conference on Continuing Medical Education.

The President reported that Mrs. Michael Wirth had recently resigned as President of the CSMS

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Auxiliary and that Mrs. Thomas Masterson had assumed that new responsibility. On the President's suggestion it was voted that the Council would alternate its dinner meetings (if feasible) between the Lawn Club and the Quinnipiac Club.

David A. Grendon Memorial

It was VOTED to change the name of the Society's Financial Aid Fund for Medical Students to the "David A. Grendon Memorial Financial Aid Fund of the Connecticut State Medical Society."

Medicare Part B Assignment Spot Announcements

After discussion, it was VOTED to receive the report as information and authorize the President to continue his dialogue with Mr. Greg Huth of the Elderly Nutrition Project regarding a television announcement on Medicare B Assignment.

Committee on Continuing Medical Education

It was VOTED to endorse the following statement which had been recommended by the Society's Committee on Continuing Medical Education:

"Where deficiencies are determined to exist through regional MCE Audit, the Society strongly supports regional CME programs to address such regional deficiencies."

1979 Budget

It was VOTED to accept the Fiscal Subcommittee's report on 1979 Budget for filing. Following discussion of the report, which was presented by Louis C. Backhus, M.D., acting in the Treasurer's absence, it was further VOTED to approve the budget as prepared by the Subcommittee and to transmit same to the House of Delegates on November 16, with the recommendation that the proposed budget and dues of $100.00 for 1979 be approved by the House.

Report from Committee on Insurance

(a) *Group Overhead Insurance Plan:* It was VOTED to send the Chairman of the Committee on Insurance a letter requesting that the committee review again the overhead insurance situation to make certain that the interests of participating Society members are not compromised in any way.

(b) *Group Life Insurance:* It was further VOTED to refer the new group life insurance proposal back to the Committee on Insurance for further study and consideration.

During the discussion of the insurance matters, it was brought out that attendance was sparse at recent meeting of the Committee on Insurance. It was VOTED to have the Chairman of the Council direct a letter to the members of the Committee on Insurance informing them that their lack of attendance at meetings was causing problems and urging them to attend future meetings.

AMA Committee on Constitution and Bylaws

Having been apprised that there was a vacancy on the AMA Committee on Constitution and Bylaws, it was VOTED to recommend the name of J. Alfred Fabro, M.D., Torrington, to the AMA to fill this post.

Dates and Location for 1980-1981 Annual Meetings

It was VOTED to approve of the following dates for the Society's Annual Meetings for 1980 and 1981:

Wednesday, April 30 - Thursday, May 1, 1980
Wednesday, April 29 - Thursday, April 30, 1981

The location is tentatively set for the Hartford Hilton Hotel; however, Society staff will explore the feasibility of other sites.

Report on CSMS Financial Aid Fund for UConn

It was VOTED to receive as information the report received from the UConn Student Affairs Office concerning the operation of the fund over a six year period. Twenty-two thousand dollars has been contributed by CSMS over this period to this fund.

Connecticut Ambulatory Care Study

It was VOTED to receive as information that auditors from the GAO, Washington, D.C., visited the Society to audit funds allocated to the Connecticut Ambulatory Care Study and that the Society received a "so-called" Contract Audit Closing Statement indicating our accounting procedures were in good order. In fact, the accounting procedures were commended by the GAO auditor.

Ad Hoc Committee on Medical Technology

It was VOTED to receive as information the composition of the newly established Ad Hoc Committee on Medical Technology: Trudeau M. Horrax, East Hartford, Chairman; Todd E. Anderson, Torrington; Martin J. Krauthamer, Darien; Benjamin Shenker, Middletown and James W. Tierney, Milford. It was also recommended by the Council that the CSMS representative on the Connecticut Commission on Hospitals and Health Care, when appointed, be requested to serve on the ad hoc committee.

Semi-Annual Meeting House of Delegates

It was VOTED to receive as information the pleasant news that Hoyt D. Gardner, M.D., President-Elect of the AMA, will be the luncheon speaker at the CSMS Semi-Annual Meeting on Thursday, November 16, 1978.

Reports—Committee on Emergency Medical Services

(a) *Ambulance Run Reports:* It was VOTED to receive as information the committee's intention "to encourage and endorse the Ambulance Run

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(b) *Passive Restraints System:* It was VOTED to approve of the following statement recommended by the committee: "that passive restraint systems be made available as an option in all new cars by Model Year 1984."

E. Tremain Bradley, M.D.

Before adjournment, E. Tremain Bradley mentioned that this was his last Council meeting and that he had enjoyed so very much his friendship, camaraderie and working relationship with other members of the Council. President Freedman spoke for the Council and praised Dr. Bradley for his assiduous, dedicated and untiring efforts for the Connecticut State Medical Society. Dr. Bradley was accorded a standing ovation by members of the Council.

N.B.: *The foregoing is a summary of the proceedings and actions of the Council on September 28, 1978. Detailed minutes of the meetings are on file at 160 St. Ronan Street, New Haven, for perusal by any interested member of the Society.*

NOTICES

ELECTROCARDIOGRAPHY AND TREATMENT OF CARDIAC EMERGENCIES

December 13, 1978

The Hospital of St. Raphael and the Connecticut Chapter of the American College of Emergency Physicians will co-sponsor a one-day symposium entitled "Electrocardiography and Treatment of Cardiac Emergencies," on Wednesday, December 13, at The Hospital of St. Raphael.

Further information may be obtained from Dr. Saul Lande, Director, Section of Emergency Medicine, Department of Ambulatory Services and Community Medicine, The Hospital of St. Raphael, New Haven, CT 06511 or by telephone (203) 789-3469.

In Memoriam

ELLIOT, K. GREGORY, Tufts University, 1926. Dr. Elliot was a general practitioner in the Hartford area since 1926 until his retirement. He was a member of the Hartford County Medical Association and the Connecticut State Medical Society. Dr. Elliot died in July, 1978, at the age of 77.

FISKIO, PETER W., Yale Medical School, 1927. Dr. Fiskio was a general practitioner in the New Haven area since 1928. He served as intern and chief resident at the Old Grace Hospital until 1929, and was a member of the staff of St. Raphael's Hospital in obstetrics, gynecology and medicine. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Fiskio died September 16, 1978 at the age of 73.

GAFFNEY, JOHN J., Loyola Medical School, 1929. Dr. Gaffney was a general practitioner in the Fairfield area since 1931. He served in the Army Air Corps during World War II as a flight surgeon, and was chief executive officer at Wright-Patterson Field Air Force Hospital, Dayton, Ohio. He was the FAA examiner for Fairfield County for more than 30 years and was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Gaffney died September 26, 1978, at the age of 73.

HIGGINS, JOSEPH J., Georgetown Medical School, 1928. Dr. Higgins was a general practitioner in the New Haven area for many years, before becoming the resident physician at St. Joseph's Residence in Enfield. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Higgins died June 14, 1978, at St. Joseph's Residence at the age of 77.

RUBIN, ARTHUR A., University of Utah, 1948. Dr. Rubin was an internist in the New Haven area since 1956. He served in the U.S. Army from 1942 to 1946, and in the U.S. Air Force from 1952-1953, and was a member of the American Board of Internal Medicine. He was also a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Rubin died September 16, 1978, at the age of 56.

PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiries of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511 (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine* as space permits.

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

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Part-time. Private group in Greater Hartford area would be interested in hiring an anesthesiologist for occasional weeks, nights, and week-end coverage. Good remuneration and benefits. Flexibility required. Possible future association to satisfactory candidate. Send CV to CSMS to be forwarded.

EMERGENCY ROOM

250 bed hospital; 40 hr. week. Excellent back-up all specialties. Attractive salary; full fringe benefits; 4 weeks paid vacation, 1 week paid education; Conn. license required; send CV to Thomas E. Winters, M.D., Director of Emergency Services; Bristol Hospital, Brewster Road, Bristol, CT 06010.

FAMILY PRACTICE

Family Practice or Internal Medicine: Physician wishes to retire. Also a month ago another physician retired from medical practice here in Torrington leaving a void which could be easily filled by a Family Physician or Internist, who would be looking for a quick start as a solo practitioner in this area. Michael E. Giobbe, M.D., 335 Prospect St., Torrington, CT 06790. 203-489-5921.

INTERNAL MEDICINE

Internist with sub-specialty training (gastroenterology or pulmonary) wanted to join board certified internist in rapidly growing community in Western Ct. Send CV to CSMS to be forwarded.

OBSTETRICS AND GYNECOLOGY

MEDICAL DIRECTOR OR ASSOCIATE MEDICAL DIRECTOR, feminist women's health clinic. Responsibilities include: performing vacuum aspiration abortions, supervision of Physician's Associate *re* birth control, pre and post-abortion care; development of medical programs, policies and procedures; dispensation of emergencies. 10-12 hrs. per week with possible expansion of role as clinic grows. Applicants should be board-eligible or board-certified in OB/GYN. Contact: Executive Director, Women's Health Services, 19 Edwards Street, New Haven, CT 06511.

PEDIATRICS

Pediatrician needed in Eastern Ct. as 3rd man in an incorporated group doing general pediatric and adolescent medicine. Training in Neonatology preferred. Norwich Pediatric Group, 92 New London Tpke., Norwich, CT 203-889-3835.

RADIOLOGY

Board certified diagnostic Radiologist to work 4-6 months yearly to augment a group in the greater Hartford area. Compensation arrangements very reasonable. Send CV to CSMS to be forwarded.

PHYSICIANS WISHING TO LOCATE IN CONNECTICUT

ANESTHESIOLOGY

Nov. '78. Age 36. AB-elig. MD, int. and res. in India. Also res. at the Med. College of Wisconsin. 12 yrs. experience in India, Europe and England. Solo, grp. or assoc. practice in med. community in Ct. Contact CSMS-Anes./RNS.

July '79. Age 29. Nat'l. bds., elig. MD from Hahnemann Med. Coll. Int. at Harrisburg Hos. Res. and fellowship (ped., cardio-thoracic anesthesia) at M.S. Hershey Med. Ctr. Wishes grp. practice in med. community. Daniel L. Derewitz, M.D., University Manor Apts., #100, Hershey, PA 17033.

Dec. '78. Age 41. Conn. license. Nat'l. bds., cert. Presently in practice. MD from Taiwan. Int. at Northeastern, PA. Res. at Dalhousie. Wishes grp. practice in med. community in Ct. Contact CSMS/Anes.-SWW.

FAMILY PRACTICE

July '79. Age 27. Nat'l. bds., elig.-'79. MD from St. Louis Univ. Int. and res. at Univ. of Rochester. Grp. practice in Northwestern part of Conn. George F. Geibel, M.D., 3108 Elmwood Ave., Apt. 6, Rochester, NY 14618.

Available immediately. Age 39. Conn. license. Nat'l. bds. MD from Saigon. Post-graduate training in OB/GYN, Gen. Surg. and Chest Diseases in Saigon. Training in US consist of Surg. assist. at Liberty Hosp., MO, Oklahoma City and CA. Wishes grp. or assoc. practice in Conn. Tin T. Le, M.D., 4 Van Buskirk Ave., Stamford, CT 06902.

Available immediately. Age 45. Conn. license. Nat'l. bds., elig. Presently in practice. MD from NY Univ. Int. at Nassau Cty. Gen. Res. at Brooklyn, VA. Wishes grp. or assoc. practice in large or med. community. Contact CSMS/FP-ML.

Spring '79. Age 30. Nat'l. bds., cert. Presently in practice. MD from Columbia Univ. Int. at Einstein. Res. at Univ. of MN. Grp. or assoc., will consider institutional practice in large or med. community. Contact CSMS/FP-RAM.

July '79. Age 31. Nat'l. bds., elig.-'79. MD from Georgetown. Int. and res. at York Hosp., PA. Grp. or assoc. practice desired in Conn. Dein M. Shapiro, M.D., 3400 Eastern Blvd., C-9, York, PA 17402.

INTERNAL MEDICINE

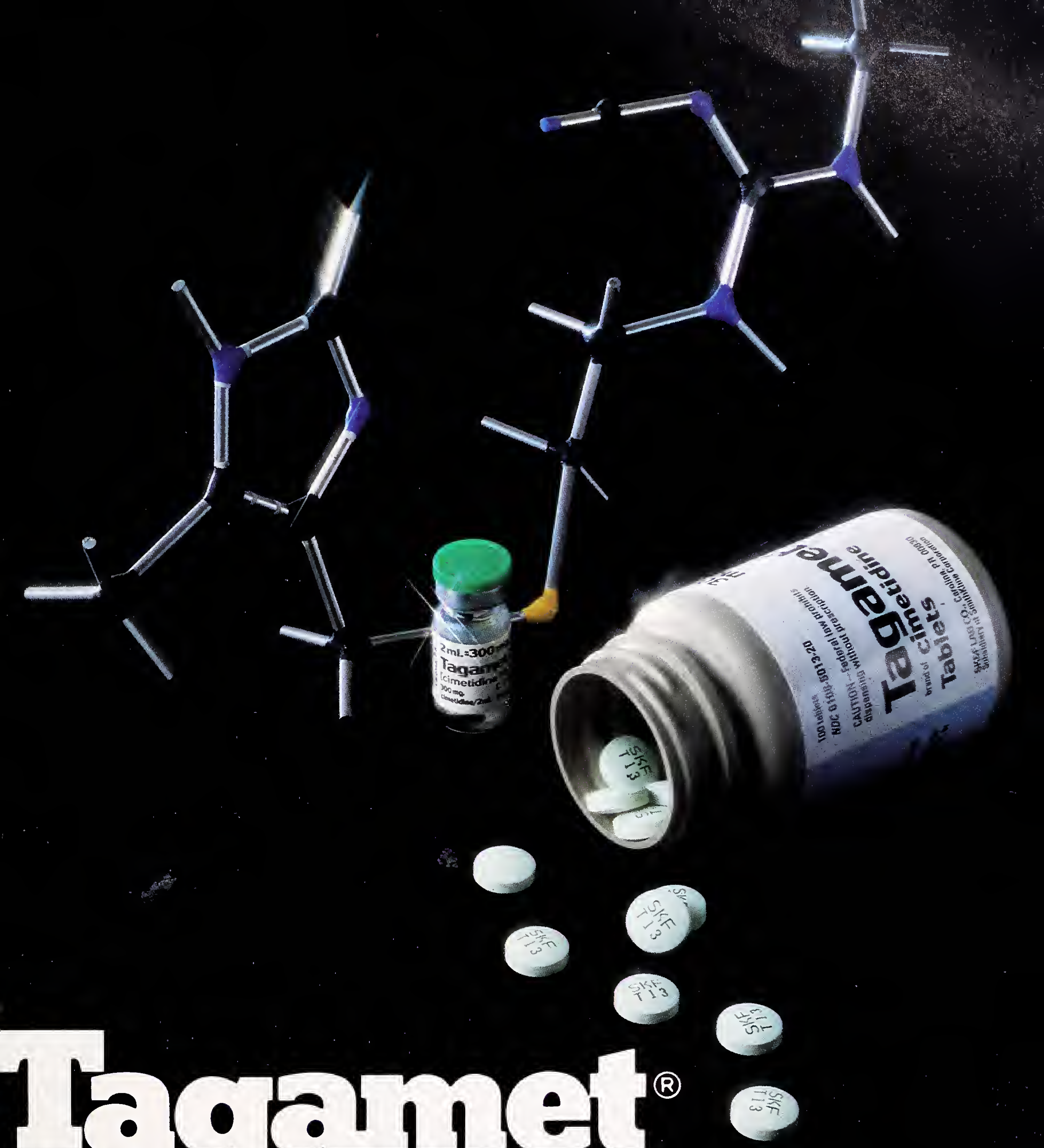
Bd. elig. Conn. license. 16 years experience. Wishes to relocate in Conn. Contact CSMS-IM/AJB.

Early '79. Age 31. Nat'l. bds., cert. Presently in practice. MD from UConn. Int. at Long Beach Med. Hosp., CA. Res. at Mayo Clinic, MINN. Presently at Indian Hosp., AZ. Wishes practice with a small grp. with low volume high quality practice in med. size community in Ct. Dennis Gottfried, M.D., 4602 Calle Redonda, Phoenix, AZ 85018.

Cardiology: Available now. Age 39. Conn. license. FLEX. AB-elig. Presently in practice. MD and int. in India. Res. and fellowship at St. Vincent's Med. Ctr., Bridgeport, Ct. Also fellowship at Jewish Hosp., O. Will consider all types of practice except solo, in any size community. G. Patel, M.D., 1503 Governor Terr., Cincinnati, O 45215.

Gastroenterology: July '79. Age. 30. Nat'l. bds., cert. MD from PA Univ. Int. and res. at Emory. Fellowship at Univ. of WA affil. hosp's. Grp. or assoc. practice desired. Roger J. Epstein, M.D., 11528 Lakeside Ave., NE, Seattle, WA 98125.

Primary Care: July '79. Age 38. Conn. license. AB-elig. MD from Hungary. Int. and res. at Griffin Hosp., Derby, Ct. Prior to med. degree, employed as Registered Med. Librarian at Yale Univ. Solo, grp. or assoc. practice in Ct. Contact CSMS/IM-MP.



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cimetidine

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Injection, 300 mg./2 ml., in single-dose vials in packages of 10.

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When painful spasm is the presenting symptom...

. in functional G.I. disorders*

Bentyl®

(dicyclomine hydrochloride USP)

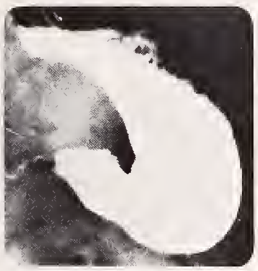
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.

Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-3497 (Y515A)

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection
AVAILABLE ONLY ON PRESCRIPTION.

Brief Summary
INDICATIONS
For use as adjunctive therapy in the treatment of peptic ulcer. IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHOLINERGICS/ANTISPASMODICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHOLINERGIC/ANTISPASMODIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION.

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders); and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: autonomic neuropathy; hepatic or renal disease; ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon; hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension; hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea, vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION: Dosage must be adjusted to individual patient's needs.

Usual Dosage: Bentyl 10 mg. capsule and syrup: *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults:* 1 tablet three or four times daily. Bentyl Injection: *Adults:* 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

Product Information as of October, 1976

Merrell

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Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215, U.S.A.

A Status Contest When One Doctor Phones Another

Question: As a medical assistant for a busy orthopedic surgeon, I'm confronted almost daily with a rather difficult situation involving phone calls between doctors. My boss, Dr. Jones, refuses to get on the phone until the other doctor picks up at his end of the line. Other doctors give the same instructions to their assistants. Often this results in grimly silent waits by two secretaries, neither of whom can give in. Even when a doctor does pick up the phone, I have to keep him waiting while I find Dr. Jones. Is there a graceful way that we can solve this problem?

Answer: General rules of telephone courtesy dictate that the person who places the call should be on the line when the other party answers. If your boss refuses to accept that principle, you might tactfully mention to him at an appropriate time that medical assistant friends of yours say their bosses won't refer to physicians who continually keep them waiting on the phone. Then suggest that your own office's policy may need re-examining.

If that doesn't work, you'll have to do some careful coordinating with other office assistants. First, never place a call for Dr. Jones unless you're sure he'll be near a phone and ready to get on. Tell the answering assistant that Dr. Jones is calling and find out if her doctor is available to take the call. If so, then put Dr. Jones on the line as soon as she starts to put the call through to her doctor.

—*Medical Economics,* May, 1978

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INTERNAL MEDICINE—CONTINUED

Pulmonary: July '79. Age 29. Nat'l. bds., elig. MD from NY Univ. Int. and res. at Bellevue Hosp. Fellowship at Boston Univ. Univ. trained, A.O.A., experienced in fiberoptic bronchoscopy, intensive care, pulmonary function testing and teaching. Grp. or institutional practice desired in large or med. community. Contact CSMS/IM-MLP.

Gastroenterology: July '79. Age 29. Nat'l. bds., cert./IM, elig./Gast. MD from NY Med. Coll. Int. and res. at Lankenau Hosp., PA. Fellowship at Presbyterian-Univ. of PA Med. Ctr. Grp. or assoc. practice in large or med. community. Drew P. Ronnerman, M.D., 275 Bryn Mawr Ave., Apt. K-43, Bryn Mawr, PA 19010.

OBSTETRICS AND GYNECOLOGY

Available now. Nat'l. bds., elig. Presently in practice. MD from Dow Med. College, Pakistan. Int. at Greater Baltimore Med. Ctr., Res. (Surg) Downstate and Kings County, (OB/GYN) at Bronx Lebanon Hosp. and Albert Einstein Med. Ctr. Will consider all types of practice in any size community. Akbar Omar, M.D., 1523 Central Park Ave., #11C, Yonkers, NY 10710.

July '79. Age 29. Nat'l. bds. MD from Chicago Med. Sch. Int. and res. at Emory-Grady Hosp. Grp. practice in Conn. desired. Gary R. Bodner, M.D., 3226 Post Woods Dr., Apt. K, Atlanta, GA 30339.

OPHTHALMOLOGY

July '79. Age 29. Nat'l. bds., elig. MD from NJ Med. Coll. Int. at Cleveland Clinic Hosp. Res. at Univ. Hosp. of Cleveland. Solo, grp. or assoc. practice desired. Peter J. Cetto, M.D., 7653 Normandie Blvd., Middleburg Hts., O 44130.

ORTHOPEDICS

Available now. Age 45. FLEX. AB/elig. Presently in practice. Int., res. and fellowship completed in Scotland and Britain. Wishes grp., assoc. or institutional practice in large or med. community in Ct. Alastair J.W. Fordyce, M.D., 4610 14th St., Lubbock, TX 79416.

PATHOLOGY

Oct. '78. Age 34. FLEX. AB/cert. MD and int. in India. Res's. at the Univ. of KY Med. Ctr. and the St. Luke's Hosp., WI. Will consider all types of practice in any size community in Ct. Kirit V. Solanki, M.D., 3635 W. College Ave., #32, Milwaukee, WI 53221.

Available immediately. Age 46. AB-cert. Presently in practice. MD from Korea. Int. and res. at Mem. Hosp., RI. Would like to practice path. only or path. with GP. Will consider all types of practice in Conn. Won P. Chung, M.D., 327 Prospect St., Pawtucket, RI 02860.

PEDIATRICS

Available immediately. Age 32. Conn. license. FLEX. AB/elig. MD from Univ. of Guadalajara. Int. at St. John's, Newfoundland. Res's. at Beth Israel Med. Ctr., Newark, NJ and Univ. of Ct. Institutional, industrial, ambulatory care or ER practice desired. William Elman, M.D., 61 Robin Dr., Collinsville, CT 06022.

Available immediately. Age 36. Nat'l. bds., elig. Presently in practice. MD from NY Med. Coll. Int. and res. at Albany. Wishes grp., assoc. or solo practice in med. community. Stephen B. Cook, M.D., 630 Patio Circle Dr., Oneida, NY 13421.

Adolescent Medicine and Psychiatry: July '79. Age 38. Conn. license. Nat'l. bds., elig.-'78 in ped. and '79 in psy. MD from Med. Coll. of VA. Int. in ped. at Children's Hosp. of Buffalo. Res. in ped. at Children's Hosp. of Birmingham. Research fellowship in med. at Mass. Gen. and Harward. Res. in psy. at the Institute of Living, Ct. Desires a community with a teenage pop. that needs and would support an adolescent practice. Also part-time work in a school, clinic or hospital. Robert S. Smith, M.D., 39 Fairlane Dr., Wethersfield, CT 06109.

SURGERY

Available immediately. Age 38. Nat'l. bds., elig. MD from the Univ. of Buffalo. Int. at Maricopa County Gen. Hosp. AZ. Res's. at Nassau Cty. Med. Ctr. and Univ. of Limburg, Holland. Grp. or assoc. practice in small community in Ct. Arnold S. Fabricant, M.D., 252 B Belmar Rd., Cranbury, NJ 08512.

Plastic Surgery: July '79. Age 36. Nat'l. bds., cert. MD from Marquette. Int. at Kansas. Res's. at Ohio State, Kansas and Akron City Hosp. Solo or assoc. practice in large community. Daniel B. Cudnik, M.D., 582 Greenwood, Akron, O 44320.

Aug. '79. Age 34. Nat'l. bds., elig. MD from Univ. of Michigan. Int. and res. at Beth Israel Hosp., Mass. Fellowship at NE Deaconess, Mass. Special interests in gen. thoracic and peripheral vas. surg. Grp., assoc. or institutional practice in med. or large community. Presently in practice. Stuart A. George, M.D., 403 Neptune St., K I Sawyer AFB, MI 49843.

Available now. Age 34. Conn. license in process. AB-cert. MD from French Faculty of Med. Int. at Monmouth Med. Ctr., NJ. Res. at St. Raphael's, Ct. Will consider all types of practice in Conn. Contact CSMS/Surg.-MJK.

Peripheral Vascular: July '79. Age 33. Nat'l. bds., cert. MD from Univ. of PA. Int. and res. Int. res. and fellowship-(Walter Reed Army Med. Ctr.) all at George Washington Univ. Hosp. Grp., assoc. or institutional practice in large or med. community. Contact CSMS/Surg.-LK.

Available immediately. Age 36. FLEX. Nat'l. bds., cert. MD from Catholic Med. Coll. Int. at Long Island Coll. Hosp. Res. at Med. Coll. of Ohio. Wishes solo, grp. or assoc. practice in med or small community in Conn. Contact CSMS/Surg.-HSL.

Sept. '79. Age. 36. Conn. license. Nat'l. bds., elig. MD from Jefferson Med. Coll. Int. at NY Hosp.-Cornell. Res. at Yale-New Haven and Univ. of Cincinnati affiliated hospitals. Wishes grp., assoc. or institutional practice in large or med. community. Seth A. Malin, M.D., Reynolds Army Hospital, Fort Sill, OK 73505.

Thoracic-Vascular: Available immediately. Age 34. Nat'l. bds., AB/GS-cert., Thoracic-elig. MD from Howard Univ. Int., res. and fellowship from Kings County Hosp., Downstate. Wishes grp. or assoc. practice in Conn. Walter S. Ramsey, Jr., M.D., 580 Flatbush Ave., Brooklyn, NY 11225.

General, Thoracic & Vascular: Available immediately. Age 44. Presently in practice. AB-elig. MD from Univ. of Toronto. Int. and res. at St. Michael's Hosp., Canada. F.R.C.S., F.A.C.S. Consider grp. or partnership. Steven R. Ross, M.D., 54 Shaughnessy Blvd., Willowdale, Ontario M2J 1H8 Canada.

June '79. Age 31. FLEX. ECFMG. MD from Guadalajara. Int. and res. at Univ. of Maryland at York Hosp., PA. Solo, grp. or assoc. practice desired. Ronald M. Yarrington, M.D., 108 Oak Street, York, PA 17402.

UROLOGY

Jan. '79. Age 29. Nat'l. bds., AB-elig. MD from Cornell. Int., res. and fellowship at Mass. Gen. Hosp. Grp. or assoc. practice in large or med. community. Trained in urologic oncology and would also be interested in pediatrics and/or transplantation if available. Peter T. Nieh, M.D., 103 Locust St., Burlington, Mass. 01803.

Available anytime. Age 35. Conn. License. Nat'l. bds., AB/Surg.-cert., Urol.-elig. MD from Yale. Int. at Hahnemann Hosp., PA. Res's. at St. Elizabeth's Hosp., MA and Walter Reed Army Hosp., DC. Grp. or assoc. practice in large or med. community in Ct. Robert A. Vollero, M.D., 13800 Blair Stone Lane, Silver Spring, MD 20906.

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Librax®

Each capsule contains 5 mg
chlordiazepoxide HCl and 2.5 mg clidinium Br.

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma; prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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In treating certain G.I. disorders...

Enhance your therapeutic expectations with the triple benefits of

Adjunctive

Librax®

Each capsule contains
5 mg chlordiazepoxide HCl
and 2.5 mg clidinium Br

antianxiety/antisecretory/antispasmodic

Librax is unique among G.I. medications in providing the specific antianxiety action of LIBRIUM® (chlordiazepoxide HCl) as well as the potent antisecretory and antispasmodic actions of QUARZAN® (clidinium Br) for adjunctive therapy of irritable bowel syndrome* and duodenal ulcer.*

ROCHE

*Librax has been evaluated as possibly effective for this indication.
Please see brief summary of prescribing information on preceding page.

In pharyngitis and tonsillitis
...prompt temporary relief of pain even before patients leave your office.
CĒPASTAT®
mouthwash/gargle/sore throat lozenges
Merrell

Proven Anesthetic Effectiveness

Spraying the throat with CĒPASTAT brings soothing relief within minutes. Your patients will appreciate this relief while waiting for therapeutic measures to take hold. The well-established anesthetic effects of CĒPASTAT provide soothing temporary anesthesia to the irritated or inflamed oropharyngeal mucosa.

CĒPASTAT in your treatment room . . .

Used as a spray, CĒPASTAT is more likely to deliver the most relief to the painful area of the throat.

Suit the product to the patient . . .

The liquid is best for use at home as a spray or gargle. Lozenges are ideal for patients on the go.

A recommendation is best . . .

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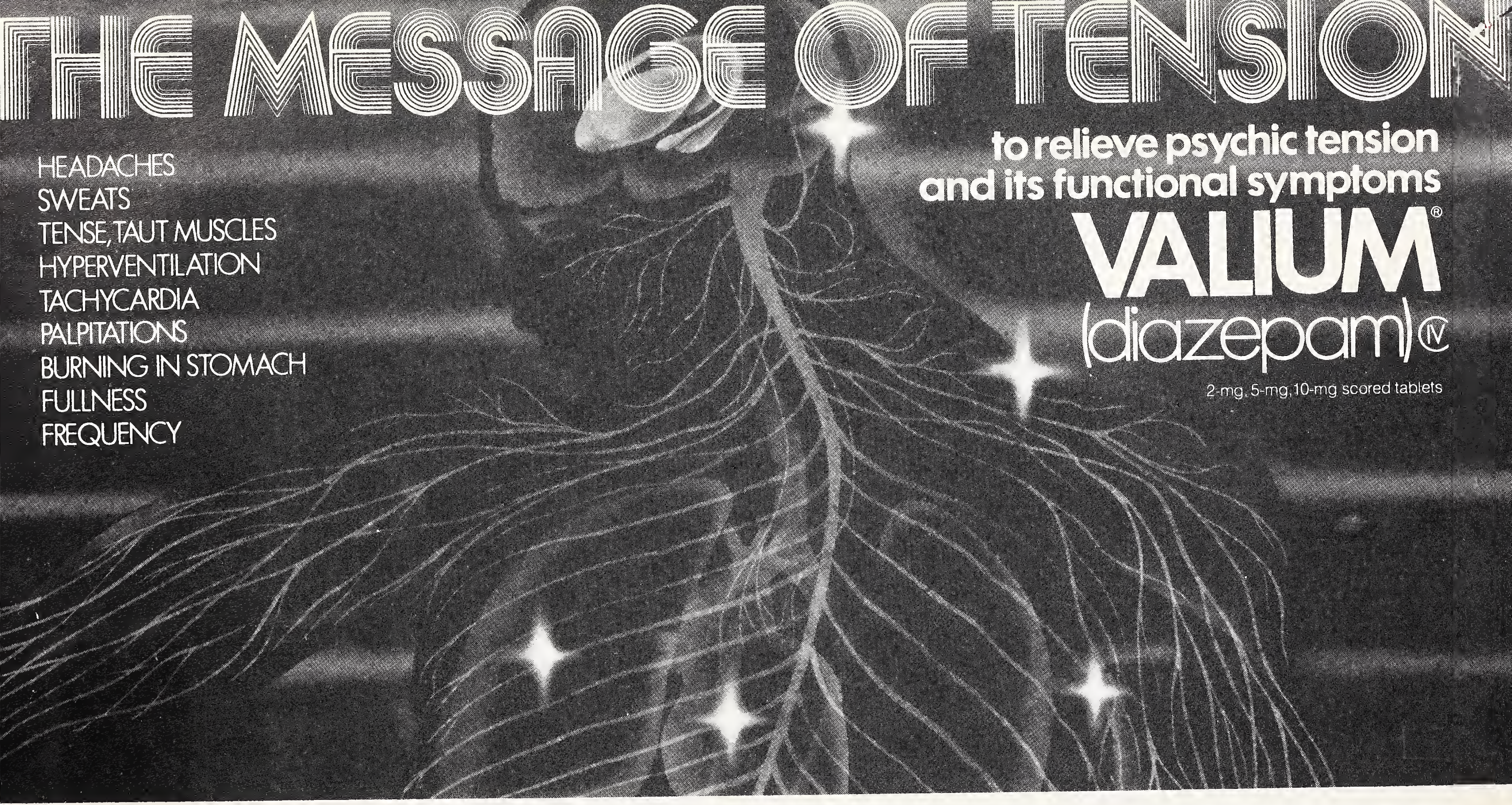

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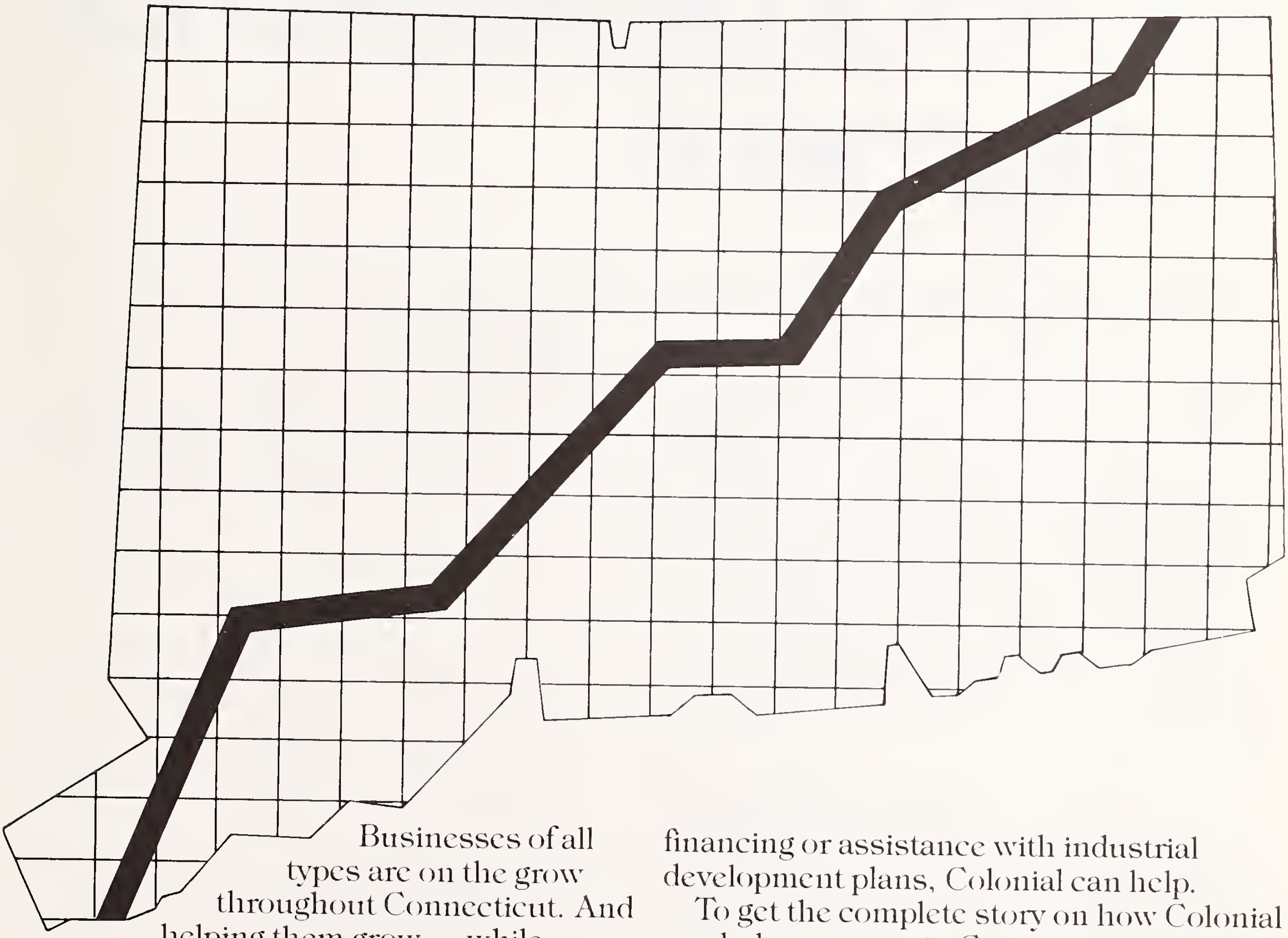

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New Directions in the Treatment of Breast Cancer: Hormone-Binding Receptors

MARTIN E. KATZ, M.D.

ABSTRACT—The presence or absence of specific hormone binding receptors provides the clinician with more certainty in his choice of strategies for treating the patient with metastatic breast cancer. Studies of combination chemohormonotherapy are underway in an effort to improve survival in patients with advanced breast cancer. Hopefully the specificity of hormone binding receptor assays as they relate to hormone responsiveness will progress rapidly in the near future.

It has been observed that approximately 20 to 40% of women with advanced breast cancer will have objective evidence of tumor regression when they are treated with ablative endocrine procedures (oophorectomy, adrenalectomy, hypophysectomy), or with exogenous hormones (estrogens, androgens, antiestrogens, progestigens, glucocorticoids). Historically, the choice of therapy was often based on menopausal status, disease-free interval following mastectomy, site of dominant disease and response to prior endocrine treatment. While many theories have been advanced to explain the observed responses to either ablative or additive hormonal therapy, no one theory can adequately explain all observed responses to endocrine manipulation.

Since modern combination chemotherapy regimens are capable of achieving 50 to 80% objective remissions[1-3] and since hormonal manipulations (prior to the advent of binding receptor assays) were averaging only 30% objective remissions in patients with advanced breast cancer, many clinicians were very reluctant to perform ablative endocrine surgery as the initial therapy of choice. Assays of hormone-binding receptors are now readily available to the clinician and afford a reliable guide as to the initial strategy that should be taken in the woman with metastatic breast cancer.

Receptors are responsible for the initial interaction between a hormone and a cell, and serve to trigger a biochemical chain of events characteristic to that particular hormone and its target cell. All normal target tissues including normal breast glandular tissue contain specific receptors for hormones. The number of hormone-binding receptor sites can be measured in vitro specifically for estrogens (hence, the term estrogen binding receptors, EBR), androgens (androgen binding receptors), progesterone or progestigens (progesterone binding receptors, PgR) and glucocorticoids (glucocorticoid binding receptors). However, the presence of a specific hormone receptor *does not mean* that a patient with advanced breast cancer should be treated with that hormone. For example, a premenopausal female with a positive EBR assay should *not* be given exogenous estrogens.

A number of investigations have correlated the presence of EBR in primary or metastatic breast tumors with responsiveness to ablative and additive hormonal procedures. The following conclusions seen warranted by the available data:

EBR positivity correlates quite well with endocrine responsiveness (Table 1). Approximately 55-65% of patients with EBR positivity may obtain a tumor regression with endocrine therapy as opposed to 0-11% of the group without EBR positivity. There is a good correlation (75-80%) between the EBR positivity or negativity of the primary specimen and subsequent metastases.[7] The histology of the breast carcinoma does not predict for EBR positivity except for the strong association between the higher incidence of EBR positivity with invasive lobular carcinoma.[4, 8] In patients with a prominent local lymphocyte reaction, the incidence of EBR positivity appears reduced.[8]

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Table 1

OBJECTIVE BREAST TUMOR REGRESSIONS ACCORDING TO EBR ASSAY AND TYPE OF THERAPY

Therapy	*No. of Regressions / No. Assayed*		*References*
	EBR +	EBR -	
Ablative	$\frac{24}{39}$ (62%)	$\frac{1}{38}$ (3%)	4
	$\frac{23}{36}$ (64%)	$\frac{1}{59}$ (2%)	5
	$\frac{59}{107}$ (55%)	$\frac{8}{94}$ (9%)	6
Additive	$\frac{5}{8}$ (63%)	$\frac{0}{6}$ (0%)	4
	$\frac{6}{10}$ (60%)	$\frac{1}{18}$ (6%)	5
	$\frac{59}{105}$ (56%)	$\frac{12}{109}$ (11%)	6

Factors which do *not* predict for the presence of EBR positivity include the grade of the primary lesion, the presence of axillary metastases, the size or number of axillary metastases, lymphatic invasion by the primary cancer and the site of metastases.[8]

Post menopausal patients have a greater incidence of EBR positivity in both the primary tumor and in metastases than do pre or perimenopausal patients[4 9] (Table 2). Within EBR positive groups, postmenopausal patients have a higher median EBR level than do premenopausal patients.[4 9] There is no correlation between the absolute EBR value in the EBR positive group and the predictability of response or the duration of that response.[6] In addition, the presence of both the EBR and PgR predicts for a higher chance of responsiveness to endocrine therapy than EBR positive but PgR negative tumors.[10]

There are several factors which partly account for the lack of endocrine responsiveness in certain patients despite the presence of EBR. It has been demonstrated by sedimentation techniques that there are at least two subtypes of EBR, a 4S and an 8S species. The 8S EBR appears to be a prerequisite for a response to an endocrine manipulation.[11] Some EBR measurements reflect the presence of only the 4S receptor. Second, it has been postulated that neoplasms may exhibit different degrees of differentiation with some of the cells in such tissue lacking EBR, and thus not being responsive to hormonal manipulation. Lastly, other hormone receptors may be important in tumor responsiveness.

The presence or absence of EBR in a tumor thus provides a powerful tool for the clinician in managing the patient with advanced breast carcinoma. In general, an endocrine manipulation is performed first in the patient with EBR positivity and metastatic disease. To date there has been no role for prophylactic hormonal therapy at the time of mastectomy.[12] A three month span is allowed from the time of initiation of an endocrine maneuver before considering it a failure. Several exceptions to this three month trial period exist. The patient with advanced liver metastases or advanced pleuropulmonary metastases should receive chemotherapy as first line treatment because the potential time to objective tumor regression is short and because the survival of such patients is often less than twelve weeks. Patients with isolated central nervous system (CNS) metastases should receive cranial irradiation as both systemic chemotherapy and endocrine manipulations do not affect the course of CNS metastatic disease.

Premenopausal Women

The endocrine treatment of choice in the premenopausal patient with metastatic breast cancer is castration by bilateral oophorectomy. Therapeutic castration may be carried out by surgery or by radiation. The advantage of surgical oophorectomy is that the major source of endogenous estrogens is removed immediately while with radiation it may take as long as three to five months before estrogen levels fall fully.

Table 2

ESTROGEN BINDING RECEPTORS IN BREAST TUMORS ACCORDING TO MENOPAUSAL STATUS

	Premenopausal		*Postmenopausal*		*Reference*
	EBR +	EBR -	EBR +	EBR -	
American	$\frac{109}{184}$ (59%)	$\frac{75}{184}$ (41%)	$\frac{234}{296}$ (79%)	$\frac{62}{296}$ (21%)	4
Japanese	$\frac{87}{153}$ (57%)	$\frac{66}{153}$ (43%)	$\frac{91}{166}$ (55%)	$\frac{75}{166}$ (45%)	4
American	$\frac{18}{58}$ (31%)	$\frac{40}{58}$ (69%)	$\frac{102}{169}$ (60%)	$\frac{67}{169}$ (40%)	9

The incidence of tumor regression by surgical castration is 25-35% in older series (pre-EBR assays) with a median response duration of 9-14 months.[13 14] Responding patients clearly live longer than non-responding patients. If the tumor is known to contain EBR activity, there is a 55-65% likelihood of response to oophorectomy. If EBR activity is absent, the chance of tumor regression occurring is less than 10% following castration. It seems reasonably well-settled that the initial therapy in the premenopausal patient with metastatic disease if EBR positive is ovarian ablation. The patient with a prolonged ovarian ablation response should undergo hypophysectomy or adrenalectomy upon relapse. The best therapy for the oophrectomy non-responder or premenopausal EBR negative patient is unknown. Occasional responses have been documented following hypophysectomy, adrenalectomy or androgen therapy but no prospective randomized trials are available to answer the question. Many oncologists would utilize chemotherapy for this group.

Postmenopausal Women

The treatment of choice in postmenopausal patients with advanced breast cancer is additive therapy, usually the administration of exogenous estrogens or anti-estrogens. There is no question that in patients more than 5 years postmenopausal (pre-EBR data) the overall results of estrogen therapy are superior to those of androgen therapy (31-37% remission rates for estrogen vs. 15-21% remission rates for androgens) except for bone metastases where androgen therapy is superior.[14-16] The average remission duration from estrogen therapy is 16 months vs. 11 months for androgens.[15] In addition, prolonged patient survival is associated with a favorable response to estrogen therapy.

Approximately 55-65% of EBR positive postmenopausal patients will respond to additive therapy while less than 12% of EBR negative postmenopausal patients will respond. Patients who have responded to estrogens and then relapsed (in the absence of life-threatening or rapidly progressing disease) can be followed for an estrogen withdrawal response.[15 17] Such a response may last from 10 to 20 months.

For the postmenopausal patient who has responded to estrogens or to androgens as first line therapy, the other hormone can be tried after waiting for an estrogen or androgen withdrawal response. A 22-30% response rate to androgens has been noted in previous estrogen responders,[16] while a 20% response rate to estrogens has been noted in prior androgen responders.[15] Combination estrogens and androgens have been used together as first line therapy but results are no better than with estrogens alone.[18]

Ablative therapy (hypophysectomy or adrenalectomy) may be attempted in the postmenopausal patient who has responded to additive therapy. Ablative therapy is unlikely to work in an estrogen or androgen non-responder. Whether the EBR positive postmenopausal patient would benefit by first having ablative therapy rather than traditional additive therapy is not known. The only study addressing this point is a randomized comparison of early adrenalectomy against adrenalectomy postponed until after a trial of estrogen therapy. There were no differences in overall response between the two groups of postmenopausal patients but EBR status was not determined.[19]

The EBR negative postmenopausal patient and the postmenopausal estrogen or androgen non-responder (despite EBR positivity) is often treated with systemic chemotherapy. Ablative therapy in these two groups is contraindicated.

Perimenopausal Women

Women within 1-2 years of the menopause have been a difficult group in terms of determining the best modality of therapy. Much of the confusion in older studies related to the inability of the clinician to determine whether ovarian function was intact. Follicle stimulating hormone and luteinizing hormone measurements have aided somewhat in this determination. In the EBR positive patient hormonal manipulation seems indicated with some investigations advocating combined oophorectomy-adrenalectomy and others androgen therapy. The EBR negative perimenopausal patient should probably receive chemotherapy.

Newer Developments in Hormonal Therapy

Antiestrogens

In a general sense, all compounds which are capable of blocking estrogenic effects may be called antiestrogens. The non-steroidal compounds tamoxifen, nafoxidine and clomiphene appear to antagonize the effects of 17β-estradiol by preventing its binding to target tissue through depletion of cytoplasmic receptors.[20]

Tamoxifen citrate (Nolvadex®), a triphenylethylene derivative has undergone extensive trials as an oral hormonal form of therapy in patients with breast cancer.[20-25] Response to tamoxifen in United States clinical trials involving 305 evaluable patients (mostly postmenopausal) with advanced breast cancer has revealed an overall objective response rate of 40% (121/305).[21] The response to tamoxifen in relation to EBR analysis has been assessed in 112 patients.[21] Two of 24 (8%) patients who were EBR negative responded to tamoxifen as opposed to 44 of 87 (50%) of patients who were EBR positive. (One patient with borderline EBR value did not respond.) Interestingly, 8 of 16 patients less than 40 years old and 17 of 58 patients ages 40-49 have responded objectively to tamoxifen. The mechanism of response in premenopausal patients is not well understood.

Adverse side effects from tamoxifen are minimal and include hot flashes, nausea, vomiting, transient leukopenic and thrombocytopenia and vaginal spotting. Tamoxifen appears to be somewhat better tolerated than the conventional exogenous estrogens, to have at least equal efficacy in postmenopausal patients with advanced breast cancer and to have less side effects than nafoxidine and clomiphene.

Medical Adrenalectomy

Tumor regressing rates following surgical adrenalectomy vary from 20 to 50% depending upon the selectivity of the patient population, prior response to hormonal manipulation, menopausal status and site of dominant disease.[19] Since many patients with advanced disease are poor operative risks, medical ablation of adrenal steroidogenesis would remove the need for major surgery and could be potentially applied to a larger group of patients. Aminoglutethimide (Elipten®), a derivative of the hypnotic glutethimide (Doriden®) blocks adrenal steroidogenesis by inhibiting the enzymatic conversion of cholesterol to pregneneolone.[26] To prevent a feedback rise of adrenocorticotropin (ACTH) sufficient to overcome the blockade, an exogenous steroid hormone such as hydrocortisone is administered. Since aminoglutethimide accelerates the plasma disappearance of dexamethasone (as do phenytoin and phenobarbital),[27 28] hydrocortisone is preferred for pituitary feedback blockade.[29]

Clinical experience with aminoglutethimide has revealed a 25 to 38% objective remission rate in patients with metastatic breast cancer.[29 30] For populations of patients where EBR status was not determined as a routine, initial response rates appear strikingly similar to those achieved with surgical adrenalectomy series. Side effects of aminoglutethimide have included dose-dependent lethargy, ataxia, dizziness and nystagmus, transient drug rash and drug fever, and hypoadrenalism (counteracted by exogenous steroid administration).[29 31 32] Side effects although common during the first few weeks of drug administration often remit. Aminoglutethimide appears to be well-tolerated with chronic administration. A prospective randomized trial comparing medical and surgical adrenalectomy has not been carried out.

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Volume Orientation: A System To Reduce Fruitless IPPB Treatments

DONALD R. MORRISON, M.D.

ABSTRACT—Some reasons for the excessive use (and therefore excessive cost) of IPPB treatments are considered. Included is the natural tendency for physicians to deny their patients no method of therapy even though the chance of success is remote. There is also the problem of agreement on a measurable indicator of the potential usefulness of IPPB. An increased inhaled volume is suggested as a rational objective for these treatments. Experience at the Hartford Hospital with a volume oriented routine for IPPB treatments is presented. A significant reduction in the unnecessary use of this form of therapy has been achieved by means of this volume oriented method.

Part of the responsibility for the containment of the rising cost of medical care must certainly be assumed by the physician since it is by his written order that many cost generating procedures are initiated. When such procedures are clearly necessary to restore a patient's health no protesting voices are heard. Conversely, when they are unnecessary and potentially harmful none would support them. This is the white and black of it but what of the intervening grey?

There are many drugs and treatments which are considered to be *good* for people with certain illnesses and yet whose goodness has not been clearly established in the overall; and whose efficacy in certain patients is poorly or not at all defined. In this grey area there tends to be a positive bias among physicians. They are more likely to prescribe for the possibility of helping their patient rather than to not prescribe and pass up a chance, however nebulous, of improving health. A basis for this attitude can be found in the portion of the Oath of Hippocrates, which states, "I will follow that system of regimen which according to my ability and judgment I consider for the benefit of my patients . . . " The key here is the promise to *use* whatever regimen the individual physician's *judgement* indicates. It is hardly necessary to point out that in the grey areas of therapy where effectiveness is neither proven nor disproven, one man's judgement is as valid as any one else's and *doing* something is more attractive than withholding something.

To whatever extent the above reasoning is valid we now have an explanation of the IPPB paradox, i.e., the very large number of treatments ordered despite a nearly unanimous cry of "overuse" from the authorities in pulmonary medicine.

If one assumes that there is indeed overuse of IPPB, what is the dimension of it? If it contributes significantly to the unnecessary cost of medical care, how can it be reduced? Is the proposed method practical? When put into operation does it produce the desired effect? This paper will attempt to provide the answers to these questions.

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More Rational Use of IPPB

Basic to the elimination of fruitless IPPB treatments is the establishment of indications for its use, to have the users agree to the indications and accept the concept that when a given patient has them he will be treated and when he does not he will not.

What are the potential indications for IPPB treatments and do they hold up under critical scrutiny based on what IPPB is known to accomplish. Many sources were consulted for possible indications and those named below are to the best of our knowledge inclusive. Each is followed by a consideration of its relationship to reality.

1. **To control flow rate for better distribution of inhaled gases to poorly ventilated portions of lung.** If treatments are of 10 minutes duration and given four times in 24 hours, the potential for improved gas flow exists for less than 3 percent of any day. It is obviously doubtful that a potentially good effect of such short duration has any lasting value.

A machine is not necessary for the production of a more effective flow rate. It is entirely practical for patients to be instructed in better breathing techniques with the added advantage that such methods are applicable throughout the day and without permanent dependence on either machine or therapist.

2. **To administer aerosols.** There seems to be little doubt that aerosols can be administered as well or better by methods other than IPPB.[1-6] The cited studies used a variety of experimental methods to show this and their results were in agreement.

3. **To augment humidity.** Here too, the provision of added humidity for ± 3 percent of a patient's day is a homeopathic gesture. If there is need for added water in inspired volumes it can be provided more effectively, precisely, and confortably by humidifiers and nebulizers used independently of the ventilator.

4. **To reduce work of breathing.** Again, the therapeutic usefulness of applying this obviously effective treatment philosophy for such a small percentage of the hospital day is questionable, to say the least. Intermittent relief from the energy cost of breathing is no more rational than brief periods of oxygen when a steady supply is needed.

5. **To induce cough.** Although coughing may occur during an IPPB treatment, there are many more effective methods for producing cough. A simple request is one; and some variation of the "tickle tube" is virtually 100 percent effective. Few patients can suppress the cough reflex induced by a catheter passed orally into the trachea or a fine tube similarly placed thru a transcutaneous needle. Cough induction cannot therefore be considered a rational indication for IPPB.

6. **To increase FIO2:** Nasal cannulas and various masks are simpler, more comfortable, and less expensive ways to do this. Also, the value of brief periods of increased oxygen supply must be inconsequential.

7. **To produce favorable "psychological" effect.** Psychological dependence on IPPB is considered by some to be a hazard of this form of treatment.[7] If a modern equivalent of the medicine man's noisy rattles and frightening masks is ever justifiable, it could certainly take the form of a less expensive and less dangerous device than a pressure ventilator.

8. **To diminish venous return to the heart.** That this can be accomplished by IPPB is certain. In the management of acute pulmonary edema, IPPB is favored by many but by no means all. Rotating tourniquets, posture, and phlebotomy are also effective, but the added positive factors of administering 100 percent oxygen and diminishing the anxiety of impending suffocation lend a special attraction to properly administered IPPB.

9. **To increase inspired volume.** Whenever a patient's condition makes it difficult for him to achieve inspired volumes (either tidal volume, sigh volume, or both) that are sufficient to prevent alveolar and small airway closure, there is a sound physiologic basis for increasing those volumes. Thus atelectasis *always* occurs in areas of the lung that are deprived of ventilation. A proportional ventilation/perfusion mismatch ensues, with physiological effects that may be evident at once. In addition, conditions are established that promote infection in the affected lung tissue. Atelectasis due to inadequate ventilation should be quickly reversible. Pneumonia is not that easily handled and often progresses to tissue destruction and sepsis. Its prevention, by prompt treatment or prevention of atelectasis, will therefore diminish morbidity and even prevent some mortality.

IPPB has been touted as a reliable treatment method for the achievement of inhaled volumes sufficient to prevent atelectasis, or to cure it if it has already occurred. The mechanism by which IPPB achieves these effects is simply the periodic ventilation of areas of lung partially or completely deprived of mainline (noncollateral) ventilation. Intermittent treatments are rational in this connection, because the absorption of air from terminal lung units requires several hours, the precise time depending on the degree of obstruction, the FIO2 and the efficiency of collateral ventilation.

Inhaled Volumes

IPPB therefore is clearly a rational treatment but only if it achieves higher inspired volumes than the patient can achieve without mechanical assistance. If any given patient achieves as high or higher volumes on voluntary deep inspiration as he achieves with IPPB, then IPPB is not helping him to better lung function and may actually be hindering. Here, then, is an objective method, a therapeutic test, to determine which patients may be helped by IPPB. If measured inhaled volumes are significantly higher with IPPB than on voluntary deep breathing, the patient may benefit from IPPB. But if volumes are as good or better without IPPB, there is no indication for this treatment.

Others have been attracted by the concept of inspired volume increase as a determinant of potential IPPB effectiveness. Cheney, Nelson, and Horton[8] take this position and in a study of 75 patients showed that only 53 percent had a 10 percent or greater increase on IPPB, using vital capacity as the volume measurement. Jones[9] compared volumes achieved voluntarily, on 5 percent CO2, on a rebreather, on IPPB at 15cm H20 pressure and on IPPB at 25cm H20 pressure. In his 15 postoperative patients, IPPB at 25 cm H20 showed the highest and most consistent tidal volumes. He considers increased volumes basic to all programs for prevention of pulmonary difficulties in the immediate postoperative period (two to five days).

With these considerations as a point of departure, it is of interest to know how many patients achieve higher inspired volumes in a given set of conditions. Accordingly, we have measured these volumes in a group of Hartford Hospital patients using a protocol reported elsewhere.[10] A total of 168 observations were made. IPPB volumes were increased over voluntary volumes by more than 10 percent in 104 of 168 tests (62%). Volumes were not increased by more than 10 percent in 64 tests (38%). In addition, the second run of voluntary inspiratory capacity was at least 10 percent higher in 55 (53%) of the positive IPPB responders, but in only 7 (10%) of the non-responders: P=0.01 (x^2).

It would appear from this that ± 40 percent of IPPB treatments given at Hartford Hospital cannot be justified by any objective measurement of even the potential for a good effect. The dimensions of this problem, both local and nationwide, can be seen from Table 1.

Although the dollar costs in Table 1 are considerable, they may not be the source of principal concern. Certainly the diversion of ten respiratory therapists at Hartford Hospital from more productive tasks is depriving many patients of the added attention they should have. On the national scene, the mental picture of 7,000 respiratory therapy and nursing personnel performing virtually meaningless tasks all day long is depressing, to say the least.

Table I

COST IN PERSONNEL AND DOLLARS OF 40 PER CENT EXCESS IPPB

	Number of Excess Treatments	*Number of Therapists Used*	*Cost in Patients' Dollars*
Hartford Hospital	53,000	10+	$265,000
Nationwide[11]	35,000,000	7,000	$175,000,000

Two years' experience with the Volume Oriented System of IPPB has now elapsed. In the year before, a mean of 11,052 treatments was ordered in a 28-day period. In the most recent comparable period, a mean of 7,431 treatments was ordered. This is a drop of 33% when compared to the load of 2 years ago. It translates on paper into eleven therapists no longer performing treatments of no benefit. It also adds up to a saving of more than a quarter of a million dollars annually in direct cost to Hartford Hospital patients plus some added amount for reduced usage of hardware.

Adverse effects from this reduction in IPPB treatments have not been observed. Mortality rates and length of hospitalization have been studied for identical time periods before and after the institution of Volume Oriented IPPB. Changes attributable to diminished IPPB treatments cannot be detected.

It is felt that a significant reduction in the unnecessary use of IPPB treatments has been achieved by this method. At the same time patients who may benefit are not deprived.

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Coronary Arteriovenous Fistula Associated with Atherosclerotic Disease: A Problem in Angiographic Interpretation

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ABSTRACT—The presence of a coronary to pulmonary artery fistula resulted in impaired distal filling of the left anterior descending coronary artery (LAD) beyond an area of atherosclerotic narrowing. Following ligation of the fistula, the distal LAD demonstrated improved flow. Coronary arteriovenous fistulae may alter the angiographic appearance of the coronary anatomy when there is associated atherosclerotic disease.

Congenital arteriovenous fistulae originating in one of the coronary arteries are commonly associated with a normal life span. It is not surprising, therefore, that they may be associated with coronary atherosclerosis. We present a case which illustrates the special problems in angiographic interpretation and management of a patient with both congenital and acquired coronary artery abnormalities.

Case Report

A 55-year-old woman with a long history of easy fatigability presented with acute angina-like chest pain. Electrocardiograms showed evidence of lateral ischemia but returned to normal in 24 hours. Cardiac catheterization performed one month later revealed normal pressures and oxygen saturations, and a small area of apical hypokinesis on the left ventriculogram. Selective injection of the left coronary artery (Figure 1) revealed apparent total occlusion of the proximal left anterior descending (LAD) artery just beyond the take-off of the first septal perforator. There was faint opacification of the LAD distally via collateral flow from diagonal and circumflex branches. An arteriovenous fistula originating as two branches from the first diagonal branch of the LAD entered the main pulmonary artery as a tortuous network (Figure 1). The right coronary arteriogram (Figure 2) demonstrated retrograde filling of the distal LAD.

Despite adequate therapy for angina, chest pain at rest persisted, and surgery was undertaken. At operation, the coronary artery-pulmonary artery fistula was ligated. After ligation of the fistula, the proximal and mid LAD lumen was noted to be patent, although heavily calcified. A saphenous vein bypass graft was placed from the aorta to the distal LAD. Following surgery, the patient has remained free of angina.

Discussion

Over 250 arteriovenous communications originating in a coronary artery have been reported.[1] Angina pectoris occurred in 22 of the 259 cases reviewed by Ogden[1] and in ten of the 150 cases reported by Daniel et al.[2] In the latter report, four of the patients were less than 40 years of age.

Myocardial ischemia secondary to a coronary artery fistula has been postulated.[1 3 4] A coronary "steal" of blood away from atherosclerotic vessels and their collateral source and into a low resistance fistula would seem to be a likely cause of myocardial ischemia. Effler et al.[3] reported one patient with coronary atherosclerosis and angina whose chest pain was improved after simple ligation of a coronary fistula. In the present case, the extent to which chest pain was exacerbated by the arteriovenous fistula could not be ascertained.

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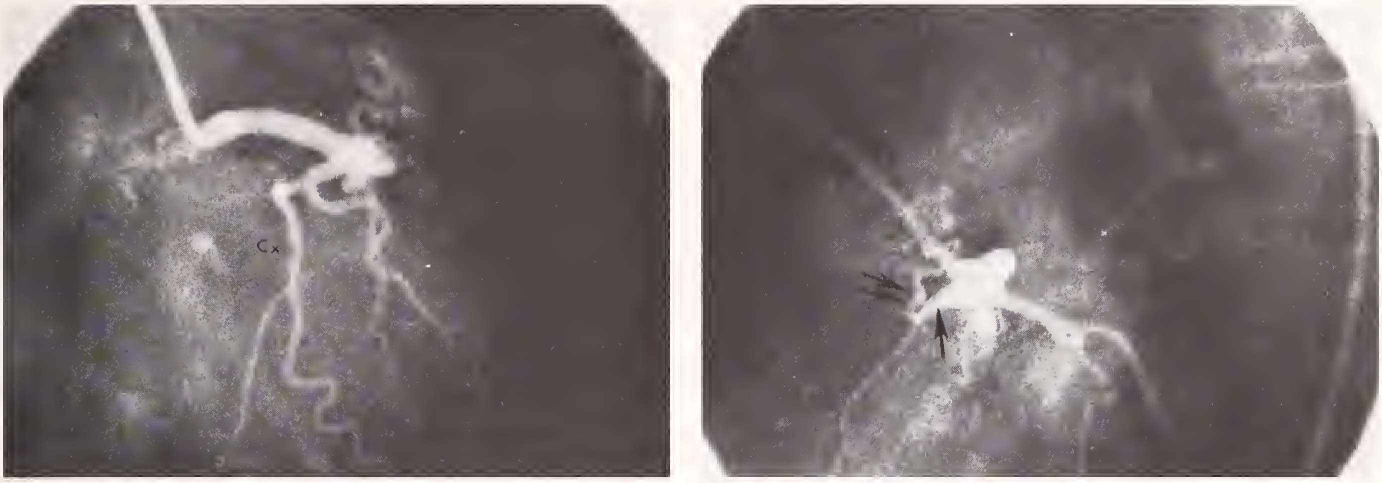

Figure 1

Selective injection of the left coronary artery.

A. Right anterior oblique view demonstrates total occlusion of the left anterior descending (arrow). Two tortuous vessels (double arrows) arise from the diagonal branch and communicate with the pulmonary trunk.

B. Left anterior oblique view shows origin of an anomalous vessel (double arrows) from the diagonal just beyond the occluded anterior descending (arrow). The pulmonary trunk is faintly seen.

Cx = left circumflex; Lt M = left main.

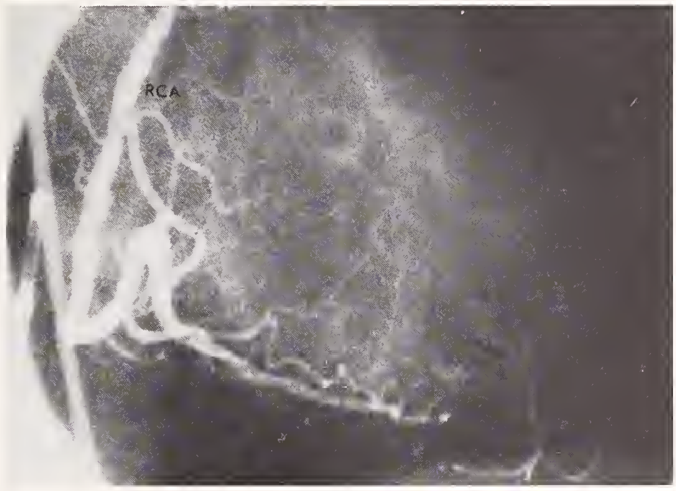

Figure 2

Selective injection of the right coronary artery (RCA) in the right anterior oblique view demonstrating retrograde filling of the distal portion of the left anterior descending artery (arrows).

Previous reports have not emphasized that errors in interpretation of coronary arteriograms may be made in the presence of an arteriovenous fistula. The mid and distal portions of the anterior descending coronary artery in the present case were not visualized angiographically and it was condluded that the vessel was totally occluded proximally and filled distally via collaterals. At the time of surgical ligation of the coronary-pulmonary artery fistula, although atherosclerosis was noted in the proximal and mid LAD, the lumen was widely patent. Presumably at angiography contrast material flowed more readily from the proximal LAD to the low resistance fistula, thus simulating a total occlusion of the LAD.

Coronary angiographers are well aware that the size of coronary arteries filled via collaterals may be underestimated, and this factor cannot be excluded as an alternative explanation in the present case.

Previous reports have emphasized that congenital coronary artery fistulae are often associated with longevity.[1] [2] [3] [4] Because of this, and because of the increasingly prominent role played by coronary angiography in the evaluation of patients with heart disease, it is not unlikely that this anomaly will be found in association with atherosclerotic coronary disease. In such cases, conservative interpretation of coronary angiograms is recommended because of the possibility of overestimating lesions in arteries communicating with the fistula. The feasibility of possible aortocoronary bypass grafting may be erroneously underestimated in such patients. In selected cases, surgical examination of the exposed vessels after the ligation of the arteriovenous fistula may be necessary.

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Sex Education of the Medical Student and the Physician

A Review

ALAN J. WABREK, M.D., F.A.C.O.G.

Traditionally, medical students learned the anatomy and physiology of the "reproductive" system; with virtually no teaching about the sexual part of the system. During internships and residencies, little or nothing, was taught about sexual problems, masturbation, marital conflict, sexual aspects of aging, or teenage sexual development. The psychosexual components that may be present in anxiety, depression, headaches, backaches, peptic ulcer, and colitis were likewise ignored.

In 1952, the first sex education course in a United States medical school started at the University of Pennsylvania. It was an elective for senior medical students. Between then and 1960, a course in sex education was started at the Bowman-Gray School of Medicine, in Winston-Salem, North Carolina; and at Washington University, in St. Louis. Dr. William Masters gave six lectures to the second year medical students. In the early 1960's research on medical education revealed the following:

1. The majority of physicians were untrained to deal with patient's sexual and sex related problems, and many felt dissatisfied with their lack of preparation.

2. Physicians' backgrounds and personalities and their formal education tended to minimize their sensitivity to, and competence in dealing with, human sexuality.

3. Members of society increasingly expected and sought medical help in sexual matters.

4. A new generation of medical students, a product of that same society, shared that expectation.

In 1951, Dr. Richard Greenbank surveyed the senior classes of the five medical schools in Philadelphia—which produced almost 10% of the Nation's physicians. Fifty per cent of the students believed that masturbation could cause mental illness, and if that was not surprising, 20% of the medical school faculty members agreed with the students. This experience appeared to be typical. A question that continually gets asked is: Why for so long had training in sexuality remained outside of formal medical education? Two factors seem primarily responsible: The sexual avoidance by society-at-large, and the personalities of the medical students themselves. Lief reported a majority of them to be shy, conscientious, and emotionally constrained.

In 1967, Burnap and Golden, estimated that patients with sexual problems comprised about 15% of general practice; while Pauly, in 1971, showed that the number of sexual problems recognized by a physician is directly related to his or her awareness of them, and his or her comfort in dealing with them. Approximately three-quarters of the physicians who did not ask questions about sexual health estimated that only 10% of their patients suffered from sexual problems; while approximately two-thirds of the physicians who routinely obtained sexual histories found that at least one-half of their patients had significant sexual problems. This latter statistic corresponds very well with the estimate by Masters and Johnson, that at least 50% of married couples in the United States are troubled with sexual problems and concerns.

Between 1960 and 1968, twenty-seven additional medical schools started courses in human sexuality and in that same year, the Center for the Study of Sex Education was formed at the University of Pennsylvania. Its main activities were to:

1. To provide a clearing house for the exchange of information about existing curricula, or those being planned, in medical schools.

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2. To implement research and evaluation of training in this field, particularly in reference to the impact upon student's judgment in recognizing and managing sexual and marital problems.

3. To offer consultation to medical schools concerning curricula designs and the development of teaching techniques.

At the Center, the Sex Knowledge and Attitude Test (SKAT) was developed by Lief and Reed. It consists of four parts: attitudes, knowledge, demographic data, and personal sexual behavior data. It has been given to 25,000 individuals including more than 14,000 medical students. One conslusion that has been repeatedly reinforced is the medical students are significantly more conservative than nonmedical graduate students on all sexual attitudes that were measured; and, they are significantly less knowledgeable. A physician, like any other person, is certainly entitled to his or her own views on sexuality, but the physician, or prospective physician, certainly has a responsibility to keep those attitudes from unwittingly reducing his or her effectiveness in health care delivery.

In the early 1970's, it was found that 15% of male and female medical students still believe that "certain conditions of mental and emotional instability are demonstrably caused by masturbation." This was a significant decrease from the 50% of the senior medical students that believed it in 1961. Twenty-five per cent of the male and 35% of the female medical students still believe that "only a small minority of all married couples ever experience mouth genital sex play;" while 35% of the male and 51% of the female medical students believe the myth that "one of the immediate results of castration in the adult male is impotence." Are these matters of concern to the medical educator?

In 1973, a survey by the Center for the Study of Sex Education in Medicine, revealed that 105 out of 106 medical schools in the United States had programs in human sexuality; 66% of them had a separate sex education course; 28% taught sexuality within a more general course; and the remaining 6% offered it separately and within a broader course. Thus, 72% of the schools had a separate sex education course. In most instances the course was taught by interdisciplinary faculty: Psychiatry was involved in 95%; Ob/Gyn in 87%; and the remaining specialties, less than 50%. Sex education was part of the core curriculum in 60%; elective in 32%; and in 8%, both. The median of actual time spent in the course was 21 hours per semester (or 42 hours total) during the four years. In about one-half of the schools, the spouse or significant other, was encouraged to attend. The course preparation was done by a faculty discussion committee in 76%, and by student faculty discussion in 53%. Teaching methods included: Lecture in 90%; small group discussion in 87%; seminars in 54%; and case demonstration in 47%.

The triad of knowledge, attitudes, and skills, represents essential components of teaching and learning human sexuality. A majority of medical educators feel that attitude modification is the most important need of the students, and there is wide pedagogic experience that students do not learn if they are uncomfortable or highly restrictive in their attitudes towards sex. There are three common ways of helping a student understand his or her sexual attitudes. Consensual validation takes place in a small group discussion and allows a student to learn where he or she stands relative to others. In other words, how does the student's beliefs, attitudes, or values, fall within the range of the group. Another technique of attitude modification is confrontation. In these instances, live or on videotape, patients, or a homosexual, or transsexual, or a prostitute would "confront" members of a small group regarding their own attitudes. Tyler, pioneered in 1970, the implosion technique. The students are literally overwhelmed with sexual stimuli, using explicit sexual visuals; oftentimes five or six sexually explicit movies would be shown simultaneously—demonstrating heterosexuality, homosexuality, male homosexuality, interracial sexuality, and male and female masturbation. This "implosion" by itself may produce some attitude change, but the majority of educators believe that the group process which follows is a fundamental variable in increasing medical students' comfort with human sexuality. After visualizing the sexually explicit material, a small group of students discussed and shared what they thought and felt during the process. The combination of consensual validation, confrontation, and implosion, have been called sexual attitude reassessment (SAR).

The knowledge part of the knowledge attitude skills triad has some variation from institution to institution, but the following six entities are common content to all of them:

1. Male/female sexual response cycle.
2. Significance of sexual and sex related problems in all phases of clinical medicine.
3. Treatment of common sexual dysfunctions.
4. Films and data showing a wide range of the behavioı—heterosexual, homosexual, or autoerotic.
5. Moral, religious, and legal forces which are shaping attitudes toward sexuality.
6. Historical roots of current attitudes.

It is probably best to start with attitude modification first, so that the student will be most susceptible to learning the knowledge or content portion of the course.

Tremendous progress has been made in the sex education of medical students and physicians, but the application and implimentation of this to every day patient care is the next goal. Improved marital and sexual health can become a reality and help alleviate tremendous human suffering. As Clark Vincent has so distinctly stated: "The theoretical position that the physician cannot, or should not, engage in any marital or sexual counseling becomes meaningless when the patients expect this role of their physician and their illnesses have sexual and marital implications, if not origins."

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Counseling Program at Hartford Hospital

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AND R. CLAY BURCHELL, M.D.

Patient care is the main focus of the Counseling Center at Hartford Hospital. This orientation has changed slightly since this service began in July, 1973. At that time, the Out Patient Care aspect was primarily concerned with treating the sexual dysfunction. Since then, we have become more interested in the interaction between illness and sexual problems and considerable experience has been gained in this field, especially with certain conditions as heart disease, mastectomy, ostomies, renal dialysis, spina bifida, etc. During this process it became apparent that illness in general may affect sexual behavior and marital harmony just as sexual problems may result in stress and hence illness. When individuals are ill they tend to reach out and may seek help in ways they would not if they were well. Many people can be helped in their relationships with short term counseling.

Patients may wonder why they could be helped by counseling: Why they cannot help themselves. The thing to remember is that helping someone in a counseling sense involves effort and knowing how to work effectively. Most often, individuals or couples who have tried to help themselves have put in the

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EDITOR'S NOTE: Description of the Counseling Program at Hartford Hospital was written at the Editor's request.

effort but did not know how to apply it effectively. A counselor may teach the patient how to help him or herself. At other times, a third person may be necessary to bring "binocular vision" to a problem and there is no way that the two involved individuals could have helped themselves.

It is impossible to describe who can be helped, but frequently the assistance required is of short duration and involves changing perspective or increasing knowledge. Any individual or couple with a marital or sexual problem would be seen. Some marital problems are referred out to marriage counselors if long term therapy is necessary..

Counseling is not so different from medical treatment in the beginning. A history is taken and a diagnosis is made. The findings and opinions of the counselor are discussed with the patient and suggestions made for on-going treatment. When treatment is decided upon, it is usually completed in five to ten hours, depending upon the situation, so there is seldom any long term involvement. Schedules are flexible and increasingly patients like to take more responsibility for helping themselves so that visits may be weekly, several weeks apart, or months apart.

Patients may become initially involved in several ways; some are referred by a physician and some are self-referred. Sometimes there is a known sexual problem and an individual or couple will want treatment. In this case, they may be booked with two co-therapists. At other times, a patient may not even be sure whether help is possible so will be seen by one therapist with commitment for only one visit. In addition, we have recently set up short diagnostic visits (30 minutes) for patients who need to talk to someone but are not sure whether or not to become involved.

In general, if there is a marital or sexual problem, it is desirable to see the involved couple. Treatment is more likely to be successful and take less time if both partners are involved. Sometimes this is not possible and then, of course, the one partner who wants to discuss the problem should come in. Charges are based on time and the number of therapists so that the charge for one therapist is half that for two, and the short visits (30 minutes) are less than the standard visit (75 minutes).

From a referring physician's point of view, patients may be seen for diagnosis and treatment, or if requested and approved by the patient, we will see the patient, make a tentative diagnosis and refer the patient back for treatment by the initial physician. Appointments can be made by calling (203) 524-2396 between 8:00 A.M. and 4:00 P.M. on weekdays.

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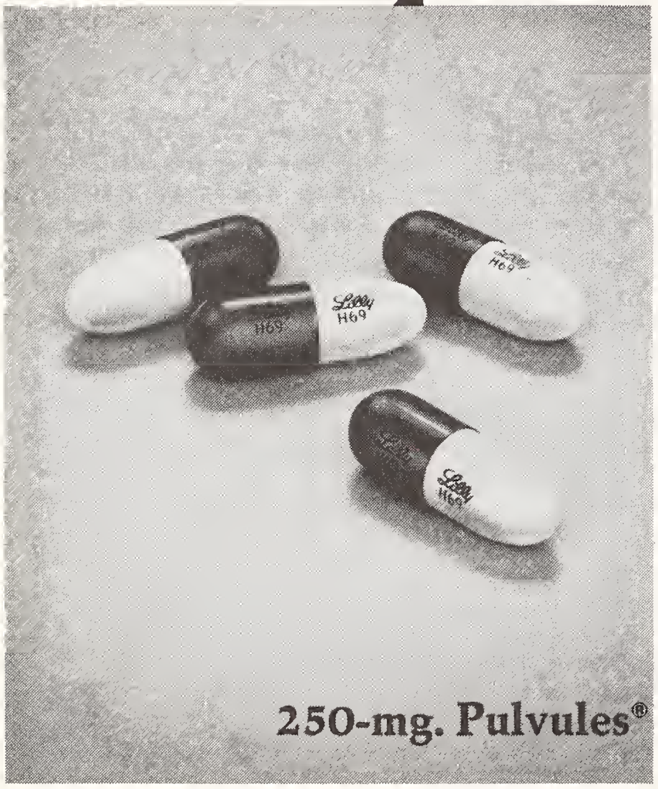

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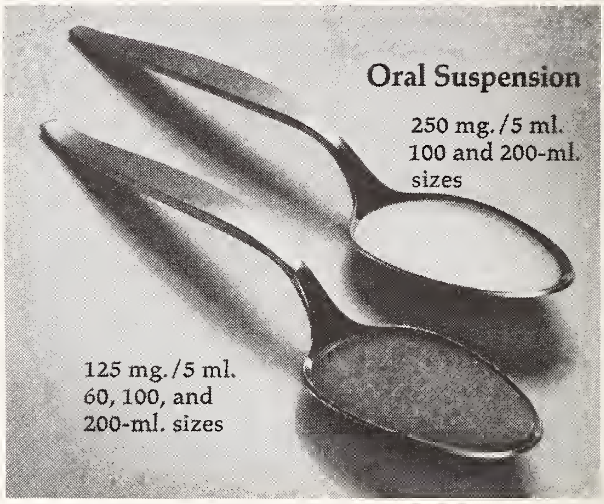

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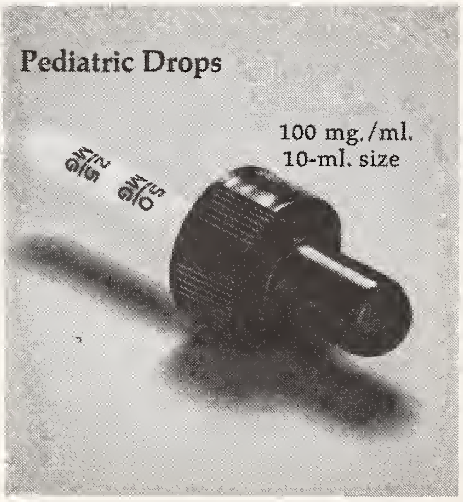

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Impact of an Aging Population on Utilization and Bed Needs of Connecticut Hospitals

CONNECTICUT HOSPITAL ASSOCIATION

ABSTRACT—Both discharges and days per 1000 residents peak in the over age 74 population with rates as high as 4,267 days per 1000 population.

By 1990, twelve years away, the 15-19 year-old population will decrease by 33.7 percent, but the over age 74 population will increase by 65.1 percent.

Assuming no change in present utilization patterns of hospital care, patient discharges and patient day projections for 1981, 1986 and 1991 will show marked decreases in pediatric utilization, but major increases in use by the over age 64 population which will account for 43 percent of the total patient days by 1991.

A shortage of over 700 adult non-maternity beds may be expected to take place in Connecticut by 1981 and by 1991 Connecticut could be short over 2,600 beds.

Already some hospitals are finding demand greater than their present capacity. During 1977, 17 of 36 hospitals had planning bed occupancies greater than the 80 percent National Guideline. Five of these hospitals already were experiencing a greater than 85 percent average occupancy.

Introduction

The impact of an aging population on the utilization and bed needs of Connecticut hospitals could be substantial. Population projections for the United States[1] indicate major shifts in the population by age through 1990. Characteristics of patient populations may differ among hospitals, particularly with regard to age and sex. Several sources[2] [3] have reported statistics indicating that discharges per 1000 residents and average lengths of stay vary significantly with age. A recent federal report indicates that "the prevalence of chronic diseases and impairments and the utilization of Medicare services which increase with age increase more rapidly beginning at about age 75," and the proportion of the total population which is 75 years and older is getting larger.[4]

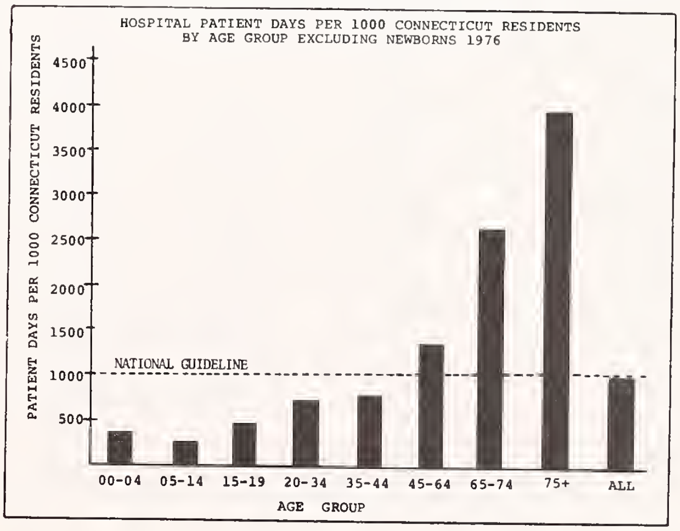
What effect will the aging of the population have for Connecticut hospitals with respect to their long range planning processes, certificate of need requirements, bed need determinations and annual operating and capital budget submissions?

What are the age characteristics of those patients currently using hospital services in Connecticut?

This report presents facts about these questions so that hospitals, health care planners and those with responsibility for public health policy will be better able to provide answers.

Findings

Patient days and discharges for Connecticut short-term hospitals are summarized by age and sex and



show marked increases with age. Although they account for only 20.6 percent of hospital discharges, patients over age 64 accounted for 33.6 percent of the total patient days during 1976. This fact is explained by the average length of stay which consistently averages 4-5 days through age 34 and then steadily rises to over 12 days per stay in the over 74 age group, as seen in Table 1. Connecticut average lengths of stay appear to be shorter than those for the Eastern U.S.[5] as a whole even without eliminating long hospital stays from the data.

The rates of days and discharges per 1000 population for Connecticut presented in Table 2 are consistently lower than the national rates, but show the same marked increases with age. Except for a small peak in the under 5 age group, *both discharges and days per 1000 residents peak in the over age 74 population with rates as high as 4,267 days per 1000 population.* The days per 1000 residents for all ages (998.8) come quite close to the National Guideline[6] of 1000 days per 1000 patients, as depicted in Figure 1.

The age distribution of the Connecticut population, as depicted in Figure 2, will change significantly in the near future. The overall age of the Connecticut population is moving toward a population with a higher geriatric component. *By 1990, twelve years away, the 15-19 year-old population will decrease by 33.7 percent, but the over age 74 population will increase by 65.1 percent.* Because the over age 64 population has significantly more admissions per 1000 and experiences longer lengths of stay than younger age groups, hospital utilization will increase substantially by 1985. *Assuming no change in present patterns of hospital care, patient discharge and patient day projections for 1981, 1986 and 1991 will show marked decreases in pediatric utilization but major increases in use by the over age 64 population, which will account for 43 percent of the total patient days by 1991.* The impact of potential changes in patterns of hospital care cannot be assessed without further study.

TABLE 1

PERCENT OF PATIENT DISCHARGES, DAYS AND AVERAGE LOS BY AGE BY SEX
CONNECTICUT SHORT-TERM HOSPITALS
JANUARY - DECEMBER, 1976

AGE GROUP	SEX	PERCENT OF DISCHARGES	PERCENT OF PATIENT DAYS	AVERAGE LOS
NBORN	F	3.89	2.26	4.27
	M	4.12	2.42	4.30
		8.01	4.68	4.29
00-01	F	0.56	0.43	5.65
	M	0.79	0.57	5.28
		1.34	0.99	5.44
01-04	F	1.06	0.53	3.65
	M	1.55	0.77	3.62
		2.62	1.29	3.63
05-14	F	2.62	1.56	4.37
	M	3.28	1.90	4.25
		5.90	3.45	4.30
15-19	F	4.24	2.48	4.29
	M	2.14	1.76	6.05
		6.38	4.24	4.88
20-34	F	17.54	10.56	4.42
	M	5.29	4.52	6.27
		22.83	15.07	4.85
35-44	F	5.76	4.87	6.20
	M	3.16	3.10	7.20
		8.92	7.97	6.56
45-64	F	12.28	15.02	8.98
	M	11.09	13.67	9.05
		23.37	28.70	9.01
65-74	F	5.38	8.47	11.55
	M	5.10	7.91	11.39
		10.48	16.38	11.48
75 +	F	6.10	10.44	12.55
	M	4.05	6.78	12.29
		10.16	17.22	12.45
ALL	F	60.38	57.01	7.16
	M	39.62	42.99	8.23
		100.00	100.00	7.34

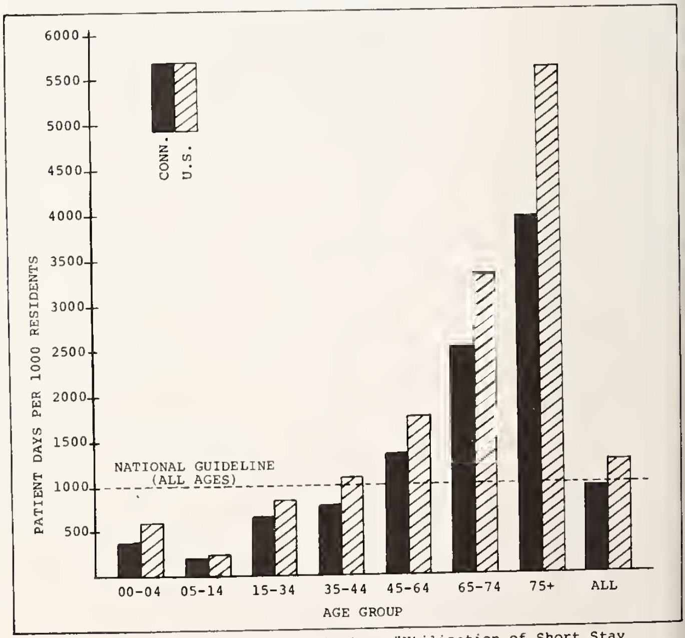
TABLE 2

DISCHARGES AND DAYS PER 1000 BY AGE BY SEX
(EXCLUDING NEWBORNS)
CONNECTICUT - 1976 UNITED STATES - 1975

AGE GROUP	SEX	CT. - 1976 DISCHARGES PER 1000	U.S.- 1975 DISCHARGES PER 1000*	CT. - 1976 DAYS PER 1000	U.S.- 1975 DAYS PER 1000*
00-04	F	76.5	96.5	330.5	491.8
	M	105.0	129.2	437.4	636.1
		91.1	113.2	385.4	565.5
05-14	F	45.7	50.5	198.9	204.6
	M	55.2	57.2	233.7	250.1
		50.5	53.9	216.6	227.8
15-34	F	191.5	222.8	838.4	1059.6
	M	65.9	85.1	407.8	556.3
		129.0	155.7	624.0	802.8
35-44	F	148.1	189.7	915.8	1311.3
	M	85.1	117.0	610.6	614.8
		117.3	154.7	766.7	1102.7
45-64	F	150.7	200.4	1348.3	1793.6
	M	147.2	188.3	1327.7	1699.8
		149.0	194.6	1338.5	1748.9
65-74	F	205.2	276.4	2362.5	3100.8
	M	246.8	330.6	2803.2	3614.2
		223.5	299.9	2556.7	3323.4
75 +	F	301.0	440.4	3765.7	5460.3
	M	348.4	500.3	4267.3	5917.2
		318.3	462.6	3948.5	5631.7
ALL	F	154.6	189.7	1107.1	1395.2
	M	107.4	134.0	884.1	1104.9
		131.7	162.8	998.8	1254.9

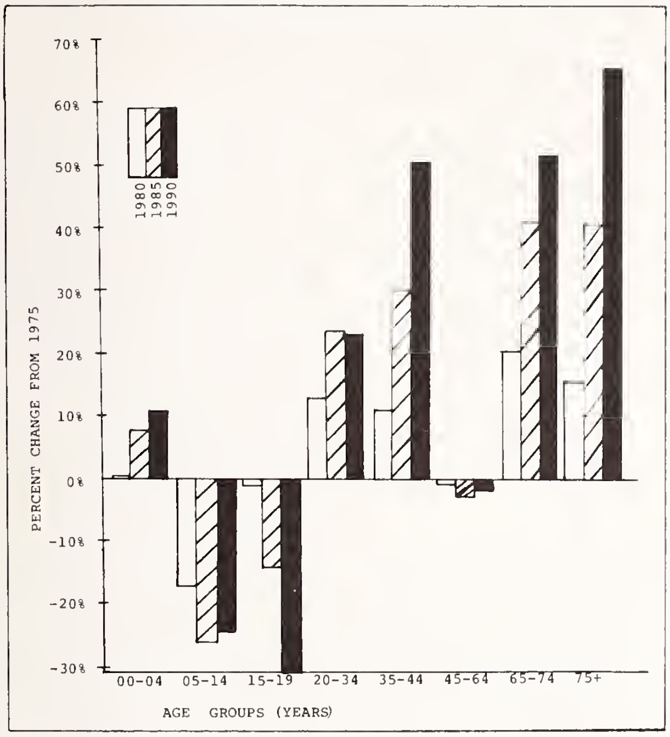
* National Center for Health Statistics, "Utilization of Short-Stay Hospitals: Annual Summary for the United States, 1975," Vital and Health Statistics Series 13, #31, April, 1977.

FIGURE 1
PATIENT DAYS PER 1000 RESIDENTS
BY AGE GROUP EXCLUDING NEWBORNS
FOR CONNECTICUT 1976
FOR THE UNITED STATES 1975*



* National Center for Health Statistics: "Utilization of Short Stay Hospitals: Annual Summary for the United States, 1975", Vital and Health Statistics Series 13, #31, April 1977.

FIGURE 2
CONNECTICUT POPULATION BY AGEGROUP
PROJECTED CHANGE FROM 1975 TO 1980, 1985, 1990



Source: Ed Butler, "Connecticut Population Projection by Age and Sex, 1975-2000," State of Connecticut Department of Planning and Energy Policy, September, 1975.

Connecticut currently has 3.7 short-term hospital licensed beds per 1000 population,[17] below the national guideline of 4.0 beds per 1000 population. Current hospital building programs call for elimination of 200-300 short-term beds in Connecticut, thus reducing that ratio even more. To demonstrate the dramatic impact of the "geriatric boom" on hospital utilization, bed needs for Connecticut hospitals were projected using the projected patient days and discharges for 1981, 1986 and 1991 and the occupancy rates of the National Guidelines for Health Planning.

Although the current supplies of pediatric and maternity beds do seem to suffice, barring any major demographic shifts, projections shown in Table 5 indicate shortages of adult non-maternity beds in Connecticut by 1981. Even including beds not conforming to established standards and including current "shell space," the projections show that *a shortage of over 700 adult non-maternity beds may be expected to take place in Connecticut by 1981, and by 1991 Connecticut could be short over 2,600 beds* assuming no major changes in technology, financing, intensity of care, modality of care or hospital bed building programs. *Already some hospitals are finding demand greater than their present capacity. During 1977, 17 of 36 hospitals had planning bed occupancies greater than the 80 percent National Guideline. Five of these hospitals already were experiencing a greater than 85 percent average occupancy.*[16] The shortages will be exacerbated by regional variations in distribution of beds and populations, and the estimated 3-6 years it customarily takes to get new hospital beds in place.

Discussion

In the last two to three years, an argument has been made that there are too many hospital beds in this country.[9] [10] [11] Much of this belief is based on reports by respected organizations such as the Institute of Medicine (IOM).[11] The IOM study, however, merely made the point that currently there are too many beds and that beds should therefore be reduced ten percent. The study did not say how long the surplus would last, did not report any population projections, and did not include age as a variable in its guidelines. Because age adjusted data were not available, current Connecticut hospital bed projections,[12] undifferentiated by age or hospital service, predict a sufficient bed supply to last until the year 2000. The data presented in this report show that population change and age adjusted data are important factors in predicting hospital utilization and bed need.

Projections for the future always pit one crystal ball against another and we are clouded by uncertainty. These projections are no different. Several other factors could substantially change them:

1. **Ambulatory Surgery.** Increasing ambulatory surgery will have some impact on bed projections. Many planners are encouraging that 20 percent of all surgery be performed in an ambulatory surgery mode in order to relieve the pressure for beds and to cut costs. Yet ambulatory surgery still requires hospital space and a bed or stretcher depending upon the type of ambulatory facilities. Achieving a 20 percent reduction of inpatient surgery does not mean a 20 percent decrease in current utilization patterns. Some ambulatory surgery is being performed already, much of it in outpatient units and thus is not included in the data base. Because some hospitals use licensed beds to house their ambulatory surgery program, the data base includes over 18,000 patient days for patients admitted and discharged on the same day. How much additional ambulatory surgery is required to reach 20 percent of all hospital surgery is unknown. Where ambulatory surgery programs use licensed beds, potential bed reductions will be minimal. In general, ambulatory surgery is an alternative for those who currently have "short stays" of one to two days. These patients also tend to be young and in the age groups where the population is now decreasing. Ambulatory surgery is not an alternative for most of the elderly, those averaging 12-plus day stays, and whose component of the population is growing. The effect of the "geriatric boom" in decreasing the percentage of potential ambulatory surgery has not been studied. This study has not dealt with diagnostic mix data needed to predict the effect of ambulatory surgery

on bed need. A study of the diagnostic mix of patients is required before the extent of the effect of ambulatory surgery on bed need can be determined.

2. **Health Maintenance Organizations (HMOs).** The impact of HMOs (used as a generic term) on hospitalizations is unclear. Because the majority of HMO enrollment comes from working families and their children, and minimally from elderly populations, their inpatient days per 1000 enrollees are not directly comparable to national averages unless both are age adjusted. Eliminating the over age 65 population from the Connecticut data, for example, would lower the statewide days per 1000 residents to approximately 784, still higher than, but much closer to, reported HMO rates.

   Connecticut already has several HMOs and medical foundations operating in the state. As HMOs are still in their growth phases, any increased impact on bed need by 1981 will be minimal. They could have greater impact by 1991. Further studies should adjust for age in order to predict what impact HMOs will have on decreasing hospital utilization.

3. **Technology.** The effect of changing medical technology cannot be predicted. It potentially can lower length of stay, increase the intensity of care as with CT scanners, or increase the number of patient days by keeping patients alive longer. One federal report indicates that since Medicare was enacted, "the increase in the discharge rate and the decrease in the average length of stay have tended to cancel one another so that the number of days of care per 1000 elderly people has not increased substantially."[13] This paper assumes no change in utilization due to technology.

4. **Convertibility.** Some of the bed shortages can be met by converting pediatric or maternity beds for use by adult non-maternity patients. However, this still will not overcome the shortage beyond 1981. It is also important to realize that present health department regulations restrict the types of cases allowed in maternity, pediatric, psychiatric and intensive care units. Many gyn admissions, however, can and do occupy maternity beds. Conversion of pediatric beds may not be structurally feasible on a strictly 1 for 1 basis; for instance, a pediatric room with eight bassinets may be convertible to only two adult beds.

   Pediatric beds in this paper are defined only in terms of age. In actuality, use depends on the maturity of the patient and the type of service(s) being ordered. Although children through age 19 might be housed in a pediatric room, many pediatric patients are housed in specialty areas, such as ophthalmology, ENT, etc.

   In addition, specialized beds such as intensive care, coronary care or burn units, which are a vital part of a hospital's bed complement must be held ready for emergency cases even though they may be used erratically.

5. **Definition of Bed.** The "planning beds" used in this paper included unstaffed, unopened and nonconforming beds as well as shell space. The planning beds include approximately 604 "potential" beds from shell space,[14] and 791 beds "nonconforming" to presently established codes.[15] Other hospital units currently in use are quite old and fast becoming obsolete. Based on current and recent hospital certificate of need applications for new building programs, potentially 200-300 existing beds will be eliminated, thus exacerbating the shortage.

6. **Regionalization.** Bed needs projected in this paper do not address regional distribution. Regional planning will call for more beds in order to meet localized fluctuations in occupancy and will have to adjust for in- and out-migration of community populations. During 1977, 17 of 36 hospitals had planning bed occupancies greater than the 80 percent National Guideline.[16] These same hospitals serving more elderly populations or regions may be facing shortages already.

7. **New Building Programs.** Current hospital building programs call for the net elimination of 200-300 beds in Connecticut. However, because new hospital construction must be planned well in advance of the anticipated need those hospitals presently contemplating development programs must be sensitive to population factors. The time needed to go from initial planning to the opening of a new hospital bed takes from three to six years depending upon the size of the undertaking and taking into account requirements of the regulatory process.

8. **Other Resources.** One hope for bed relief might be other institutional resources such as long-term facilities. However, hospital discharge planners are frequently finding it more difficult to locate a satisfactory placement for patients. If the number of long-term care beds does not keep pace with the elderly population, there will be no place to send short-term hospital patients needing additional post-acute care, and the patient will stay *even longer* thus further contributing to the need for more hospital beds. Probably Home Care programs will offer some relief for those elderly with relatives willing to care for them. More adequate financing of alternatives to inpatient hospital care cannot be predicted, but could alter the emphases on different modalities of care.

APPENDIX A

Materials and Methods

Hospital discharge abstracts were obtained through the Commission on Professional and Hospital Activities (CPHA) for 27 hospitals:

- W.W. Backus Hospital
- Bridgeport Hospital
- Bristol Hospital
- Danbury Hospital
- Day Kimball Hospital
- Greenwich Hospital Assn.
- Griffin Hospital
- C. Hungerford Hospital
- Lawrence & Memorial Hospitals
- Meriden-Wallingford Hospital
- Middlesex Memorial Hospital
- Milford Hospital
- Mt. Sinai Hospital
- New Britain General Hospital
- New Milford Hospital
- Norwalk Hospital
- Park City Hospital
- Rockville General Hospital
- St. Francis Hospital & Medical Ctr.
- St. Joseph's Hospital
- St. Mary's Hospital
- Hospital of St. Raphael
- St. Vincent's Medical Center
- Sharon Hospital
- Stamford Hospital
- Waterbury Hospital
- Winsted Memorial Hospital

Abstracts were obtained through the Children's Hospital Automated Medical Programs, Inc. (CHAMP) for Newington Children's Hospital; and through Yale-New Haven Hospital's internal computer system. All were merged into a uniform data base.

The seven short-term hospitals which are not included in the data base are:

- Bradley Memorial Hospital
- Hartford Hospital
- Johnson Memorial Hospital
- Manchester Memorial Hospital
- U Conn Health Ctr., John Dempsey Hospital
- Windham Community Memorial Hospital
- W.W. II Veterans Memorial Hospital

The two Veterans Administration hospitals, a naval hospital and specialized psychiatric, rehabilitation and long-term care hospitals also were not included. Age, sex, and length of stay variables obtained from such discharge abstracts are quite reliable. The Institute of Medicine Reports error rates of only 0.1 percent for the admission and discharge date, 0.7 percent for sex, and 1.9 percent for the date of birth variables in a national sample of discharge abstracts.[18]

TABLE 3

PROJECTED BED NEEDS EXCLUDING NEWBORN BASSINETS
36 CONNECTICUT SHORT-TERM HOSPITALS
1976 1981 1986 1991

BED TYPE	FEDERAL OCCUPANCY GUIDELINE	1977 PLANNING BEDS*	PROJECTED BED NEEDS***			
			1976	1981	1986	1991
NEONATAL - ICU	65% **	99	93.2	102.4	106.8	103.9
PEDIATRIC (14 YRS OR LESS)	75%	975	690.0	615.0	599.4	623.1
MATERNITY	75%	748	566.8	619.1	667.4	667.4
ADULT (MORE THAN 14 YRS) NON MATERNITY	80%	9,719	9,556.9	10,488.4	11,481.1	12,343.2
TOTAL EXCLUDING NEWBORN		11,541	10,906.9	11,824.9	12,854.7	13,737.6

* Includes staffed, unstaffed, unopened and noncornforming beds, and shell spaces.
** Based on Pediatric units of less than 39 beds.
*** Bed Formula = $\frac{\text{Total Patient Days}}{\text{365 (366) Days X Occupancy Guidelines}}$

The data base was modified to eliminate patients discharged from the one chronic disease unit of a general hospital in Connecticut. Four abstracts with negative lengths of stay and four abstracts with questionable ages were eliminated from the data base as well. All discharges where the admission date was identical with the date of birth were coded as age—"Newborn." One should be careful not to confuse the Newborn age groups with Newborn service, since some newborns are treated in ICU or Pediatric Services. The 2,743,385 patient days, representing 83.2% of the expected discharges, were then summarized in ten age groups for each sex.

Percent of discharges, percent of days, and average length of stay for each age group were then calculated for Table 1. Age groups were selected on the basis of clinical significance. The patient days and discharges by age and sex were then adjusted to 100 percent of the expected total (using day and discharge data from the Blue Cross Cost Studies, FYE 9/30/76 for the missing hospitals and assuming the same age patterns shown by the 29 hospitals in the study) for Table 4 and used in calculating the rates per 1000 residents. Overall, net in-migration and out-migration across the Connecticut state lines for hospital services seems to cancel out.[19] It is assumed that this holds true for all ages. Any extensions of this study to regional planning areas, however, will have to adjust for in- and out-migration.

Although Butler's population projections[20] are the only Connecticut data available by age through the year 2000, they appear to be quite reasonable. They are much lower than the Department of Planning and Energy Policy[21] projections by town, which are thought to be quite high. They fall between Steahr's[22] high and low projections. Butler's 1985 projection of 3,333,000 differs little from the Health Department's overall projection of 3,340,140 for the state.[23]

Population projections for 1980, 1985 and 1990 were converted to a percent change from the 1975 totals, as depicted in Table 5. The percent changes from the 1975 populations were multiplied by the

TABLE 4
DISCHARGES AND DAYS PER 1000 CONNECTICUT RESIDENTS
EXCLUDING NEWBORNS BY AGE BY SEX **
1976

AGE GROUP	SEX	ESTIMATED* POPULATION	ESTIMATED DISCHARGES	ESTIMATED DAYS	DISCHARGES PER 1000	DAYS PER 1000
00-04	F	95,400	7,295.0	31,532.4	76.5	330.5
	M	100,500	10,547.6	43,960.2	105.0	437.4
		195,900	17,842.6	75,492.6	91.1	385.4
05-14	F	258,500	11,809.1	51,421.0	45.7	198.9
	M	267,400	14,766.1	62,494.0	55.2	233.7
		525,900	26,575.2	113,915.0	50.5	216.6
15-19	F	145,600	19,108.9	81,657.7	131.2	560.8
	M	154,300	9,639.5	58,165.5	62.5	377.0
		299,900	28,748.4	139,823.2	95.9	466.2
20-34	F	367,000	79,055.0	348,106.0	215.4	948.5
	M	353,700	23,828.0	148,974.2	67.4	421.2
		720,700	102,883.0	497,080.2	142.8	689.7
35-44	F	175,200	25,952.9	160,448.6	148.1	915.8
	M	167,400	14,246.4	102,213.4	85.1	610.6
		342,600	40,199.3	262,662.0	117.3	766.7
45-64	F	367,400	55,351.3	495,385.3	150.7	1,348.3
	M	339,600	49,972.6	450,903.6	147.2	1,327.7
		707,000	105,323.9	946,288.9	149.0	1,338.5
65-74	F	118,200	24,250.1	279,251.0	205.2	2,362.5
	M	93,100	22,980.1	260,976.7	246.8	2,803.2
		211,300	47,230.2	540,227.7	223.5	2,556.7
75+	F	91,400	27,507.4	344,185.1	301.0	3,765.7
	M	52,400	18,258.7	223,608.5	348.4	4,267.3
		143,800	45,766.1	567,793.6	318.3	3,948.5
ALL	F	1,618,700	250,329.7	1,791,987.1	154.6	1,107.1
	M	1,528,400	164,239.0	1,351,296.1	107.4	884.1
		3,147,100	414,568.7	3,143,283.2	131.7	998.8

* Ed Butler, "Connecticut Population Projection by Age and Sex, 1975-2000," State of Connecticut, Department of Planning and Energy Policy, September, 1975.

** Newborns defined as date of birth equal to admission date

TABLE 5
CONNECTICUT POPULATION BY AGE AND SEX
PROJECTED CHANGE FROM 1975 TO 1980, 1985, 1990

AGE GROUP	SEX	% CHANGE 1980/1975	% CHANGE 1985/1975	% CHANGE 1990/1975
00-04	F	0.3	8.5	11.8
	M	0.2	8.5	11.8
		0.3	8.5	11.8
05-14	F	-18.7	-28.4	-24.9
	M	-18.6	-27.4	-23.9
		-18.6	-27.9	-24.4
15-19	F	0.0	-14.1	-33.1
	M	-2.4	-17.3	-34.3
		-1.2	-15.7	-33.7
20-34	F	11.9	20.1	19.6
	M	15.8	29.8	29.3
		13.8	24.8	24.4
35-44	F	11.0	33.0	50.1
	M	11.6	27.5	47.9
		11.3	30.3	49.0
45-64	F	0.1	-2.8	-1.5
	M	-0.8	-3.6	-1.6
		-0.3	-3.2	-1.6
65-74	F	16.7	36.0	49.1
	M	22.9	43.3	55.3
		19.4	39.2	51.8
75+	F	17.7	37.7	60.4
	M	16.6	42.2	73.4
		17.3	39.4	65.1
ALL	F	2.9	6.5	9.7
	M	2.9	6.6	10.0
		2.9	6.5	9.8

Source: Ed Butler, "Connecticut Population Projection by Age and Sex, 1975-2000," State of Connecticut, Department of Planning and Energy Policy, September, 1975.

1976 patient days and discharges for projecting the 1981, 1986 and 1991 patient days and discharges, as shown in Table 6.

Projected Bed Need is defined as the average daily census divided by the occupancy goal. Other formulas accounting for variations in hospital inpatient census[24 25] or bed needs[26 27] may provide better estimates of true bed need if they use age adjusted data. National Guidelines were used here only to make a point, not to favor such a formula. The average daily census is calculated by dividing the total patient days by 365 days (366 for 1976).

Occupancy goals were taken from the National Guidelines for Health Planning.[28]

Pediatric beds were calculated using patient days, excluding all newborn days for the 14 and under age groups.

Maternity days were calculated by subtracting the patient days of the males from females in the 15-44 age groups, and multiplying the result by 55.4 percent. 55.4 percent forces the results to equal the 1976 (from CHA Cost Analysis reports) data and is assumed to hold for 1981, 1986 and 1991 projections.

Adult non-maternity days were calculated by subtracting the maternity days from the sum of all patient days by patients over 14 years of age.

Neonatal ICU days were calculated as 14.36293 percent of the newborn days. This percentage, also assumed to hold true for the projections, was the known neonatal days percentage of all newborn days

TABLE 6
HOSPITAL UTILIZATION PROJECTIONS FOR CONNECTICUT
1981, 1987, 1991 BY AGE BY SEX

AGE	SEX	DISCHARGES TOTAL 1981	DAYS TOTAL 1981	DISCHARGES TOTAL 1986	DAYS TOTAL 1986	DISCHARGES TOTAL 1991	DAYS TOTAL 1991
NEWBORN	F	19,224.8	81,855.4	20,051.4	85,375.1	19,508.6	83,063.6
	M	20,357.9	87,332.6	21,233.3	91,087.9	20,658.4	88,621.7
		39,582.7	169,188.0	41,284.7	176,463.0	40,167.0	171,685.3
00-01	F	2,509.9	14,138.3	2,715.1	15,294.2	2,797.7	15,759.3
	M	3,557.5	18,736.0	3,852.2	20,288.0	3,969.3	20,905.0
		6,067.4	32,874.3	6,567.3	35,582.2	6,767.0	36,664.3
01-04	F	4,807.0	17,488.7	5,200.0	18,918.5	5,358.1	19,493.9
	M	7,011.2	25,312.1	7,592.0	27,408.8	7,822.9	28,242.5
		11,818.2	42,800.8	12,792.0	46,327.3	13,181.0	47,736.4
05-14	F	9,600.8	41,805.3	8,455.3	36,817.4	8,868.6	38,617.2
	M	12,019.6	50,870.1	10,720.2	45,370.6	11,237.0	47,557.9
		21,620.4	92,675.4	19,175.5	82,188.0	20,105.6	86,175.1
15-19	F	19,108.9	81,657.7	16,414.5	70,144.0	12,783.9	54,629.0
	M	9,408.2	56,769.5	7,971.9	48,102.9	6,333.2	38,214.7
		28,517.1	138,427.2	24,386.4	118,246.9	19,117.1	92,843.7
20-34	F	88,462.5	389,530.6	94,945.1	418,075.3	94,549.8	416,334.8
	M	27,592.8	172,512.1	30,928.7	193,368.5	30,809.6	192,623.6
		116,055.3	562,042.7	125,873.8	611,443.8	125,359.4	608,958.4
35-44	F	28,807.7	178,097.9	34,517.4	213,396.6	38,955.3	240,833.3
	M	15,899.0	114,070.2	18,164.2	130,322.1	21,070.4	151,173.6
		44,706.7	292,168.1	52,681.6	343,718.7	60,025.7	392,006.9
45-64	F	55,406.7	495,880.7	53,801.5	481,514.5	54,521.0	487,954.5
	M	49,572.8	447,296.4	48,173.6	434,671.1	49,173.0	443,689.2
		104,979.5	943,177.1	101,975.1	916,185.6	103,694.0	931,643.7
65-74	F	28,299.9	325,885.9	32,980.1	379,781.4	36,156.9	416,363.2
	M	28,242.5	304,559.8	32,930.5	373,979.6	35,688.1	40[illegible],296.8
		56,542.4	630,445.7	65,910.6	753,761.0	71,845.0	821,660.0
75 +	F	32,376.2	405,105.9	37,877.7	473,942.9	44,121.9	552,072.9
	M	21,289.6	260,727.5	25,963.9	317,971.3	31,660.6	387,737.1
		53,665.8	665,833.4	63,841.6	791,914.2	75,782.5	939,810.0
TOTAL		483,555.5	3,569,632.7	514,488.6	3,875,830.7	536,044.3	4,129,183.8

from the Connecticut State Department of Health Survey.[29]

Newborn days used in the calculation of neonatal ICU days were calculated using national percentages of deliveries by age of mother[30] (Health-US) (18.5 percent, 76.6 percent and 4.8 percent for age groups 15-19, 20-34 and 35-44 respectively) in order to divide the known 1976 newborn patient days into three groups by age of mother. Newborn days for 1981, 1986 and 1991 were then projected using the percent changes of the age group and summing the three totals.

APPENDIX B

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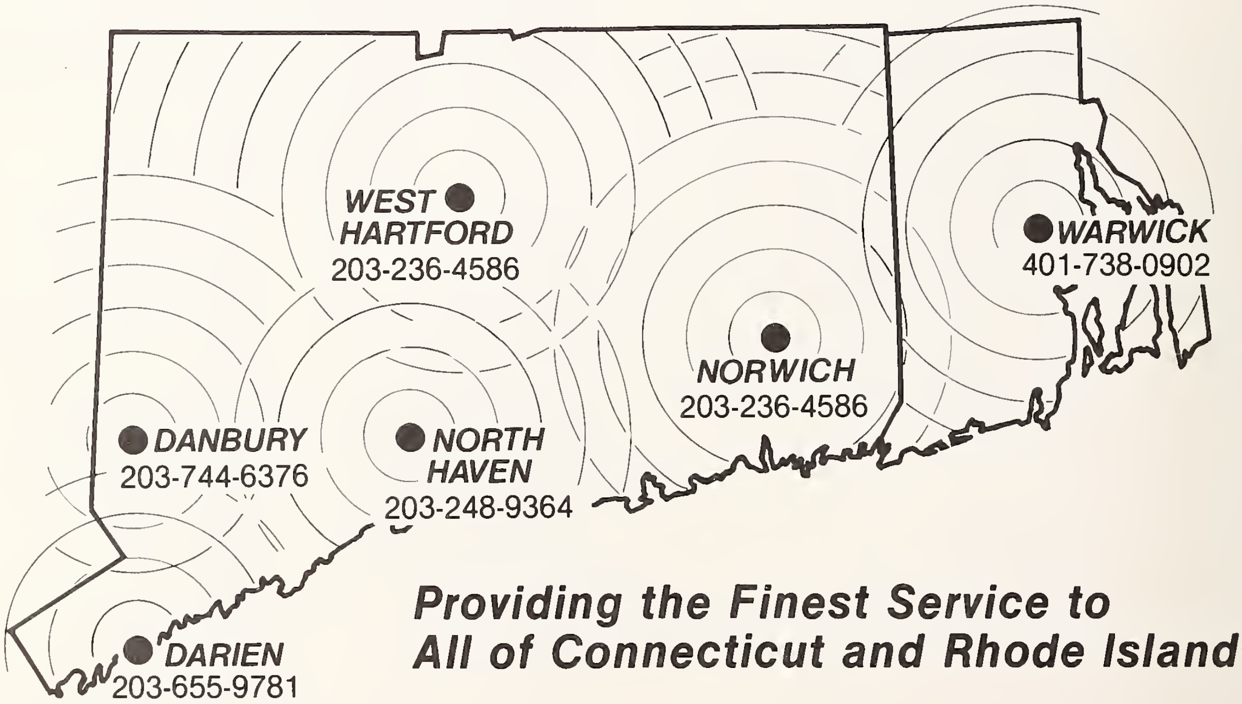

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The Significance of PSRO and HSA to the Practicing Physician

DANIEL MARSHALL, M.D. AND JOSEPH F. CANNON

With the advent of the Medicare program in 1966, the practice of medicine in the United States has witnessed the gradual introduction of regulatory agencies emanating primarily from the federal government and, to a lesser extent, from the states. These bureaucratic structures have multiplied to the point where we find ourselves confronted by a vast array of agencies. As the government addresses itself with increasing fervor to the problem of escalating health care costs, these agencies have been charged primarily with cost containment.

The physician in practice has probably heard of the Health Systems Agency (HSA), the Professional Standards Review Organization (PSRO), the State Commission on Hospitals and Health Care (CHHC), as well as a long list of Federal Titles with different numbers and regulations. His initial reaction has been one of bewilderment as he helplessly witnesses this encroachment on the previously sacrosanct area of the physician-patient relationship. His bewilderment increases upon recognizing that the agencies with which he must deal frequently appear duplicative, fragmented, and in many instances, adversarial and counterproductive.

The proliferation of federal and state agencies in the Health Care field has ushered in the "Age of Accountability." This tangled web of bureaucracy has developed as a reaction to certain historical policy principles which have resisted change: first, there has been natural reluctance by the government to interfere with the free enterprise system; second, the long held resistance of the healing arts profession to submit to outside control of its activities; and third, the traditional dependence upon the concept of freedom of choice and the theory of supply and demand as the major mechanisms for consumer control of the health care system and its services, quality, supply, and costs.

During the transitional period of the past twenty years significant changes in the health care system and in health care itself have modified these policy principles in many areas. The rapid growth in the magnitude and complexity of health care delivery has resulted in a poorly defined and pluralistic two-tier system—the traditional "cottage" practice of medicine and the sophisticated quasi-institutional and institutional sector. Social activism has increased in the area of health care, demanding the enunciation and recognition of the right of all citizens to a high quality of care. Finally, there has been a vast increase in federal tax dollars made available for health. Significant changes have been exacerbated by predictions of doom regarding the ability of the nation to subsidize rapidly mounting health care costs and isolated perceptions of consumer dissatisfaction.

The response of national policy makers to the "health care crisis" created by these changes has been a three-pronged attack aimed at a) control of the demand for health services; b) control of the supply of health services; and c) assurance of acceptable minimum levels of quality.

The health insurance industry has long used the principles of the exclusion of certain services and practice settings from coverage and the incorporation of co-insurance as mechanisms for the control of the demand for health services. With the availability of federal funds through the Medicare and Medicaid programs, these exclusionary mechanisms, particularly in the Medicare program, have been further refined. However, attempts to control demand through reimbursement or the lack of it have been only marginally successful in that they failed to recognize the role of the physician in the health care system as a "demander" as well as a provider of health services.

The dilemma involved in attempting to reconcile high quality health care with cost containment was well summarized by the Congressional Staff comments concerning the Hospital Cost Containment Act in 1977 which read:

> The patient has limited ability to destinguish necessary and unnecessary care. Once in hospital, he has a strong interest in receiving the best care possible. The pervasiveness of insurance cover-

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age has meant that the cost of treatment is of little concern, both to the physician and the patient. The physician, who acts on the patient's behalf, is inclined to use all the services that will improve the diagnosis and therapy or reduce the possibility of malpractice suits.

The government's attempt to meet this challenge has produced Professional Standards Review Organizations (PSRO's) throughout the country. These organizations, while initially perceived by the practicing physician as overseers of quality, were specifically designed to directly impact upon the physician's role in the demand for health services as an adjunct to reimbursement mechanisms for the control of demand. PSRO was charged specifically with two major areas of utilization control. The first involves the assessment of the necessity of services rendered, the second involves the assessment of the ability of a facility to provide quality health care in an economical manner. Thus, while PSRO's are developing programs throughout the country involving physician (peer) review of medical costs, there is still considerable discussion about the eventual ability of the PSRO mechanism to adequately fulfill the cost control desires of the Congress.

With respect to the supply of facilities for the delivery of health services, the initial federal foray into this field involved the Hill-Burton Amendment to the Public Health Service Act of 1946, which has, as its top priority, the expansion of institution services resources. In recent years, however, the emphasis has shifted to the control of the expansion of such institutions. The attempt to control the supply of medical services has culminated in Public Law 93-641 which required each state, in order to qualify for most federal health funds, to establish a Certificate of Need program. The agencies established by the federal government for the monitoring and control of this function are the "Health Systems Agencies." The HSA's are mandated to contain a majority of consumers on every policy-making body. The program is now in its third year of operation, with every community included in one of the nation's 205 health systems planning regions. To date, inconsistent results from this control mechanism have been apparent.

While the attempt to control the supply of health resource expansion represents an important first step, it may have only peripheral effects on costs as its major thrust is to control expansion of existing facilities which may be excessive. A major cause of this problem is the restriction of the Certificate of Need program solely to a review of the expansion of services rather than to decertifying uneconomical existing services.

The third phase of the federal government's attempt to control and monitor health care costs has produced a mechanism to insure quality control in conjunction with the aforementioned resource control mechanisms. The attempt to establish an acceptable minimum level of quality health care is the responsibility of the PSRO organizations. Criteria have been developed to ensure that the care delivered by an individual provider in an institution meets acceptable standards. This PSRO function is extremely important in assuring that approaches to cost containment and the control of demand and supply of health services do not interfere with the quality of care.

The interrelationship of these three approaches to the control of the health system (i.e., demand, supply, and quality) is essential in meeting the primary goals of the Federal Government (cost containment), the Health Systems Agencies (an improvement in the health status of the region's population), and the Professional Standards Review Organizations (assurance of an acceptable minimum level of quality of health services). Failure to coordinate these various control mechanisms might well result in effects opposite to those desired.

Unfortunately, the practicing physician's perception of the potential impact of these control mechanisms is limited and naive. His major concern is that if PSRO fails to function effectively and meet standards set by the Department of Health, Education and Welfare, a third party (other than the peer review with which he is comfortable) will enter his hospital, his convalescent home, and eventually even his private office to carry out reviews. For this reason PSRO has received much cooperation. However, a much greater potential threat to medical practice is the failure to adequately perceive the Congressional mandate to HSA's and the potential impact of this program on the entire system for the delivery of health care which now exists. HSA's and cost containment agencies now possess the authority and capability to design a future health care delivery environment which could be potentially hostile to the practicing physician.

The practicing physician, both individually and through the PSRO, now has the opportunity to participate in the design of the delivery environment in which he and his colleagues will practice for the coming generation. However, this opportunity is dependent on the recognition and acceptance by the medical practitioner of two important dynamics: the role of the HSA in controlling the supply of health resources and the structure of the practice setting; and the role of the PSRO in defining the nature of health resources needed and the system structure required. Until these dynamics are recognized, accepted and actively integrated by the individual practitioner, there is little hope for the development of a rational system for the delivery of health care which will be acceptable to him.

The Medicolegal Significance of the Package Insert

HAROLD L. HIRSH, M.D., J.D., F.C.L.M.

The medicolegal significance of the package insert is expanding. The use of the package insert is increasing in determining negligence in medical malpractice suits against physicians and hospitals. There is a determined movement in the United States to extend the inclusion of the package insert to all patient prescriptions beyond the present requirement that it be included with contraceptive pill packets.

Although the Food and Drug Administration (FDA) recognizes that the package insert supplies authoritative, substantiated information upon which the physician and patient can rely, there are a number of unanswered questions which particularly create dilemmas for the physician.

Not only does the role and power of the FDA with regard to the package insert remain unsettled, but the FDA has issued vague, ambiguous, and inconsistent policy statements regarding the legal significance of the package insert. This is particularly critical in setting the standard of care for prescribing by physicians. Furthermore, the package insert has serious medicolegal shortcomings. It frequently does not contain all available information, and lags behind known accepted data. In addition, the courts are not uniform in recognizing and accepting the FDA's policy statements.

The purpose of the paper is to amplify, analyze, and explain these problems. Courses of action for prescribing, based on established legal duties and responsibilities, are suggested for physicians. Some appropriate principles of law are reviewed with the purpose of minimizing legal expense and liability.

A study by the Commission on Medical Malpractice of the US Department of Health, Education, and Welfare indicates that drug-related malpractice accounts for ten percent of all cases.[1] These lawsuits include the use of the wrong drug, improper dosage, failure to promptly diagnose and treat adverse reactions, and failure to warn patients of reasonably forseeable side effects.[2] [3] [4] One recent development that could portend serious legal problems for physicians is the increasing pressure for generic substitution.[5]

As a result of the enormous growth in the number of new drugs in the last decade, it has become difficult for most physicians to keep informed about drugs through the usual medical media. The package insert grew out of a need to present physicians with accurate information regarding a drug, apart from that imparted in the advertising and promotional literature of the pharmaceutical manufacturer. Articles and advertising in medical journals as well as drug manufacturers' promotional activities including literature and visits by representatives were the main sources of new drug information. Unfortunately, physicians were not always made aware by the drug manufacturers of a drug's side effects, contraindications, and incompatabilities, nor were all journals readily accessible to physicians. Yet the courts have required physicians to be aware of and implement new information on drugs.[6] [7]

In an attempt to remedy the situation, the FDA in 1961 promulgated a regulation that provides for a package insert to be on or within all bulk prescription drug packages. It is known as the "full disclosure" regulation and requires that labeling on or within the package from which the drug is to be dispensed bear adequate information for its use. This includes indications, effects, dosages, routes, methods, and frequency and duration of administration, as well as any relevant hazards, contraindications, side effects, and precautions under which practitioners licensed by law to administer the drug can use it safely and for the purposes for which it is intended. This includes all

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purposes for which it is advertised or represented. The package insert was not intended to convey other information, for example, that relating to the diagnosis and treatment of disease. In essence the package insert denotes the drug's dosage, safety, and efficacy.[8, 9]

In order for an indication to be listed on the package insert, it must have been proved that the drug is safe and effective for the designated purpose. The FDA considers the insert to have a twofold purpose: to alert physicians to the conditions under which the drug is acceptable and prescribable; and to limit the claims manufacturers can make about drug products.

Legal Status—Friend or Foe?

In these malpractice-conscious times, how important is this little document, the pharmaceutical package insert, to the physician? There is significant agitation to include the package insert with all filled prescriptions. This is now required with the dispensing of the contraceptive pill package. Just what effect would a patient prescription insert have on malpractice? Before that question is addressed, some background on the package insert would be helpful.

At present it is still uncertain whether the pharmaceutical package insert is a legal document or just an informative piece of literature. The requirement that the document accompany all packages of drugs has created a controversy and division of authority regarding its legal status. Does the package insert set the standards the physician must follow, and has it increased his/her liability for the administration of new drugs or of old drugs for new uses? What if the physician strays from the approved usage and dosage schedule as set forth by the package insert? To put it another way, is the insert merely a label to be used in an advisory manner by the physician, or is it a "legal" document admissible in a court of law as sole proof that the physician has negligently departed from the usages and dosages stated in the insert?

The FDA has made several assertions, some seemingly contradictory, on this matter. Three in particular shall be examined.

1. The FDA has indicated that it regards the package insert as a part of the labeling of the drug. Although it is established legally that drug labeling is not binding, a few courts have decreed that the package insert itself defines the standard of care, and any deviation from it is prima facie evidence of negligence. Physicians' response has been to call it a therapeutic straitjacket. Some claim that the insert passes the whole responsibility for medication to the physician, and that if physicians adhered to the letter of every insert they would not prescribe any drugs at all.

Some physicians want to see the package insert dramatically changed, its quasi-legal status eliminated, giving way instead to a solely educational function. For the time being, it is unlikely that such changes will be made. It seems more likely that the FDA may move in the opposite direction.[8]

2. The FDA has indicated that the package insert is not intended under the law to serve as a totally current repository of all the information regarding the drug. In fact, it is well known that the package insert is frequently behind the times. The FDA admits that the insert contains only those indications and usages based upon substantial evidence of safety and effectiveness. However, the FDA has also said that it does consider the package insert to be an authoritative document of particular importance, clearly indicative of a standard of care that should be followed by physicians.

3. The FDA has indicated that good medical practice and patient interests require that physicians be free to use drugs according to their best information.[10] Mistakes or errors involving the usage of a drug are not a violation of the law of negligence. However, when a physician prescribes a drug for a use not in the approved labeling, he or she invokes two responsibilities. The first is to be well informed about the drug and to base the use of it on firm scientific rationale and sound medical data. The second is to be ready and able to cite a text, journal, or article, or show that the use is reasonable and consistent with the sound practice of medicine. This should not be insurmountable, as many uses of drugs for unlabeled indications are widely accepted and fully established long before the use is approved by the FDA. The physician cannot ignore the package insert, however.

Although the insert does not restrict physicians to using a drug only for labeled indications, any physician deviating from the package insert might be called upon to defend such a departure in a lawsuit. In a malpractice suit the judge can permit the admission of any labeling as evidence, and instruct the jury to consider the insert as an indication of the standard of care. The pharmaceutical package insert has figured in judgments against members of the health-care industry involving significant awards.[11] For that reason, physicians must be as cautious in using an old drug for a new use as in using a new drug. The medicolegal significance of the patient prescription insert can be inferred from the experience with the pharmaceutical package insert.[12]

Legal Implications

There is widespread uncertainty regarding the legality of using accepted drugs for unapproved uses and using drugs not approved by the FDA. This undoubtedly grows out of an ambiguous understanding of the responsibilities and powers of the FDA and the legal status of the package insert.[13] This, in turn, arises from the seemingly inconsistent policy statements issued by the agency. The FDA has on occasion declared that from its standpoint the package insert is nothing more than controlled advertising. At other times the agency has declared that it considers the package insert authoritative. Asked to interpret that declaration, the FDA has explained that it means that the insert is medically sound. It wants physicians and patients to know that the package insert is supported by substantial evidence and both parties can rely on what they read in the insert.

Unfortunately, there are numerous gaps existing between accepted medical practice and the various package inserts. The FDA generally deals with a particular usage of a drug only when the pharmaceutical company wants to include it in the insert. Therefore, it is important to note that if a use is not included on the insert, there is no implication that scientific evidence does not exist for that use of the drug. It may mean only that the FDA has not been asked to review such data. Usually the omission occurs because the pharmaceutical company does not have enough of a market to make it economically feasible to undertake the studies to justify that use of the drug to the FDA. Physicians then need not be intimidated from using an accepted drug for an unapproved use when it is medically sound.[14]

Since the package insert represents only the submitted prescribing information, it can be argued that it is not intended to nor can it tightly circumscribe the physician's use of a drug. As in all medical situations, the physician's studied professional judgment and discretion dictate variation in usage and dosage from that recommended on the insert. Following this line of argument, use of a drug, once it is marketed, is the practitioner's responsibility, medically and legally.

What may happen legally if the physician prescribes an investigational drug or an old drug for a new use? As long as there are no adverse reactions, nothing is likely to happen legally. On the other hand, if there is an untoward effect, the burden of proof will certainly rest with the physician to demonstrate that that use of the drug was not inconsistent with accepted or good medical practice. The physician can show this by means of scientific medical treatises and articles, clinical reports on the use of the drug, or by the practice of other reputable physicians. This is not an unreasonable burden.

Furthermore, withholding a drug may be the wrong course of action. Malpractice can be charged if it can be shown that an investigational drug or an approved drug (but for an unlabeled use) was withheld when it could and should have been administered. Good medical practice at times requires administration of a drug in the face of known side effects. The matter is one of calculated risk.[15 19] If the patient's condition warranted use of a drug and no other drug were as effective, the physician would not be held liable if side effects occurred.[20]

The decisions, interpretations, and conclusions of the FDA are not legally binding on physicians or courts. Even the FDA's most rigid interpretations of its drug labeling regulations, which include the package insert requirement, denote that it merely contains adequate information under which physicians can use the drug safely for the purposes for which it is intended and listed, including all purposes for which it is represented or advertised. There is no explicit prohibition against the use of the drug in an unapproved manner. Most courts have accepted the FDA's interpretation of its own regulations. However, some courts, despite the FDA's interpretations, consider the package insert information as prima facie evidence of the standard for the drug's use. Regardless, the package insert is merely one piece of evidence. Ultimately, any controversy would be settled in that area by a judge or jury.

Critical to the physician's use of drugs in ways not approved by the FDA is the legal requirement of informed consent. The best defense the physician has is proof of informed patient consent. The fact that the patient has been informed should be recorded on the chart (including date and time). To that end, the patient should clearly understand when he or she is taking a drug for an unapproved use and not for an established use. The patient should be warned of all reasonably forseeable risks and mishaps. Patients should be told about potential drug reactions, particularly self-detectable reactions. The physician is not duty-bound to recite the whole package insert, but if the insert is given to the patient, the physician is legally required to ascertain the patient's comprehension. In order for patients to be able to detect certain adverse reactions, they have to be alerted to them. Failure to warn is a major problem now. Not only is it good medical practice, but fully informing the patient allows a sharing of the burden of the risk-taking decision between physician and patient.

What should a patient do when contemplating the use of an approved drug for an unlabeled or unapproved use? Many physicians are now disinterested in finding new uses for the old approved drugs because they realize that they may be called into court to account for the use of drugs, even for labeled indications. Some physicians believe that unlabeled or unapproved prescribing is illegal or at best extralegal. However, the prescribing of an approved drug for an unspecified or unapproved use is not illegal. On occasion, such prescribing may actually be required in the exercise of good medical judgment.

A critical example of the medicolegal uncertainty revolving around the package insert is what has been termed the "therapeutic orphan" phenomenon. Numerous package inserts do not contain information regarding the use of the particular drug in children and pregnant women. Since these two classes of people are not available for drug evaluation, neither the drug company nor the FDA can list the appropriate data. What is the physician to do when pediatric and obstetrical drug data are not available? These patients frequently require therapy and obviously must be treated with drugs actually not approved by the FDA specifically for them. It is reasonable to assume that unless a drug is specifically proscribed for these groups, the physician may use it in children and pregnant women in appropriate dosages with adequate clinical and laboratory observation and follow-up. A clear understanding of the situation with the patient or parents, and their approval, should essentially eliminate any liability.

If the physician prescribes a drug according to the package insert, does that protect him/her from all liability?[21] Of course, prescription of a drug in ignorance of available information regarding its potential harm is clear negligence! If there are warnings about the drug in sources other than the package insert, particularly in medical journals, the physician is held accountable for those warnings, as well as for knowledge available from any source, including his/her own experience. Strict adherence to the package insert does not afford immunity from liability when the insert is barren but the information is available elsewhere.

From this discussion it is apparent that there exist conflicting interpretations of the legal implications of the FDA-approved package insert. There also remains the question as to the individual physician's obligation as a result of the printed material. While it is critical to remember that the FDA does not have the power to control physicians and dictate the practice of medicine, particularly when it comes to prescribing drugs, the physician should bear in mind that courts do have the power to rule on a use of a drug retrospectively. Ultimately, any controversy would be settled in that area by a judge or jury. Unfortunately, the legal significance of the package insert, like many legal doctrines, varies among the various jurisdictions. It therefore behooves the physician to investigate the legal status of the package insert in his or her jurisdiction. With that knowledge the physician can better support his or her use of a drug whichever legal status the courts ultimately assign the package insert.

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Medicolegal Digests for Physicians

State May Regulate Physicians' Fees for In-Hospital Services

The State Health Services Cost Review Commission may regulate the rates charged by radiologists, pathologists, and cardiologists for in-hospital services, a Maryland trial court ruled.

A statute authorized the Cost Review Commission to review and regulate the cost of services provided by hospitals. The Commission's staff recommended changes in the rates charged by a hospital for radiology, cardiology and pathology services. After a public hearing, the Commission concluded that the salaries of radiologists, pathologists, and cardiologists were subject to its review and proposed to adjust the salaries downward. At the same time, the Commission ordered the hospital to eliminate its practice of including a charge for patient telephones in the room rate. The Commission's final order restructuring compensation rates and eliminating the telephone charge became effective on March 1, 1977. The hospital appealed.

Affirming the Commission's authority to set rates for the physicians, the court rejected the hospital's argument that the physicians were independent contractors and that their services were not hospital services. The court said that the Commission was a consumer-oriented agency created to insure that the costs patients incur while in hospitals are fair and reasonable. The services provided by the physicians were such an integral part of the hospital that they should be included in the total services provided by the hospital, the court said.

Moreover, the hospital and physicians could not achieve indirectly what they could not achieve directly. It was immaterial whether a patient paid the hospital which then paid the physicians a salary or paid the hospital acting as a billing agent which passed the fee on to the physicians, the court added.

The court agreed with the hospital that the Commission had not fully considered regional and geographic variations in establishing the charges for different services. The court ordered an additional review of the rate schedule to consider factors such as the quality of services, population density, and the numbers of hospitals competing in the area.—*Holy Cross Hospital of Silver Spring, Inc. v. Health Services Cost Review Commission* (Md. Cir. Ct., Montgomery Co., Law No. 46598, Dec. 6, 1977).

Court Permits Withholding Treatment of Incompetent's Incurable Disease

The guardian of an incompetent resident of a state hospital could be permitted to withhold treatment of the resident's leukemia, the highest court of Massachusetts ruled.

The resident, 67, had an I.Q. of ten and a mental age of about three. The profoundly mentally retarded man had lived in state institutions for 53 years. In April, 1976, when acute myeloblastic monocytic leukemia was diagnosed, the superintendent of the institution petitioned for appointment of a guardian. The court appointed a guardian, who filed a report on the resident's condition.

After reviewing the evidence, the judge concluded that the following considerations weighed against administering chemotherapy to the resident: his age; his inability to cooperate with the treatment; probable adverse side-effects; low chance of producing remission; the certainty that treatment would cause suffering; and the quality of life possible for him even if the treatment would bring about remission.

Concluding that the negative factors of treatment exceeded the benefits, on May 13, 1976, the judge ordered that no treatment be administered to the resident for his leukemia. The judge also ordered that all reasonable and necessary supportive measures be taken to safeguard the resident's well-being and to reduce any suffering. On September 4, 1976, the resident died of bronchial pneumonia, a complication of leukemia.

On July 9, 1976, the highest court of Massachusetts affirmed the lower court's decision. In its written opinion, filed November 28, 1977, the court said that a person had a privacy right to refuse medical treatment for a terminal illness.

The substituted judgment of the guardian was supported by the evidence, the court said.—*Superintendent of Belchertown State School v. Saikewicz*, 370 N.E. 2d 417 (Mass. Sup. Jud. Ct., Nov. 28, 1977).

This material has been abstracted from THE CITATION, A Medicolegal Digest for Physicians, published by the AMA, February, March and April, 1978.

Privileges and Malpractice Insurance

A medical staff's bylaws requiring all staff members of a private, nonprofit hospital to carry professional liability insurance as a condition of maintaining medical staff privileges were reasonable and could be enforced by the hospital, the Arizona Supreme Court ruled. The amount of insurance, as set by the medical staff and approved by the hospital Board of Trustees, was $250,000.

The only physician in a small town in Arizona filed suit against the out-of-town hospital to enjoin it from enforcing the insurance requirement against him. The hospital served the town in which the physician lived.

A trial court granted summary judgment for the hospital, finding that it did not act unlawfully, arbitrarily or capriciously in promulgating the requirement. An appellate court reversed and enjoined the hospital from enforcing the insurance requirement.

Reinstating the trial court's decision, the Supreme Court said that it had only a narrow power to review the actions of the hospital. There was no evidence that the procedure followed by the hospital in conducting a hearing on the physician's refusal to renew his liability insurance was improper.

Reviewing the procedures followed in malpractice suits, the court noted that a hospital will almost always be joined as a codefendant. If the hospital is innocent of wrongdoing, it could recover its expenses from the tort-feasor physician if he is insured, the court said.

"If, indeed, some conscientious lawyer decides not to include the hospital in an action where the finger of negligence points directly and solely to the doctor, we can be certain it will be only because the physician does indeed have malpractice insurance," the court added.

The hospital had a right to take reasonable measures to protect itself and its patients from the effects of liability suits, the court said.

The physician was prevented from exercising staff privileges by his own choice, the court concluded.—*Holmes v. Hoemako Hospital,* Docket No. 13220-PR (Ariz. Sup. Ct., Dec. 9, 1977).

Purchase of CT Scanner by Physicians' Group Not Subject to Approval by Health Commission

The purchase of a CT Scanner by a group of neurologists was not subject to approval by the state Commission on Hospitals and Health Care, a Connecticut trial court ruled.

The Commission was authorized to approve all capital expenditures of $100,000 or more by any health care facility or institution. A professional corporation formed to provide neurological services planned to purchase a full body and head CT Scanner at a cost of more than $600,000. When the Commission discovered that the group planned to buy the scanner, it filed suit to enjoin the purchase without its prior approval.

Rejecting the Commission's claim, the court said that it had no authority to regulate the physicians' group. The physicians' group did not fall within the definition of health care facility or institution. Moreover, the Act was not meant to cover private physicians practicing in their offices, the court added. Even if the Act was intended to cover the physicians, the trial court said that such regulation and restriction would be unconstitutional as applied to them. To regulate them would violate their right to practice their profession free of unreasonable governmental interference, the court concluded.—*Connecticut Commission on Hospitals and Health Care v. Neuro-Diagnostics, P.C.,* Docket No. 143812 (Conn. Ct. of Common Pleas, Dec. 20, 1977).

Ineffective Vasectomy and Malpractice

The parents of a child born after the husband had a vasectomy were entitled to recover damages for medical expenses, pain and suffering, loss of consortium and the costs of rearing the unplanned child offset by the value of the child's aid, comfort and society, the Minnesota Supreme Court ruled.

A father of seven children underwent a vasectomy in December, 1970. A sample of his semen was tested in January, 1971, and his physician telephoned him later that day and informed him that the results of the test were negative. In fact, the results of the test revealed a sperm density of 5 to 10 sperm cells per high-powered microscope field. Relying on the erroneous belief that the operation had been successful, the patient and his wife resumed normal sexual relations without contraceptives.

Seven months later he returned to the clinic for a second test and was correctly advised that the vasectomy had been ineffective. The next day his wife found out she was pregnant, and in March, 1972, she delivered a healthy baby boy. In a malpractice suit against the physician, the parents claimed that the birth of their eighth child was a direct result of his negligent postoperative care. A jury returned a verdict of $19,500 for the parents, and the physician appealed.

Upholding the action for wrongful conception, the Supreme Court said that it would allow recovery by the

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parents for prenatal and postnatal medical expenses, the mother's pain and suffering during pregnancy and delivery, and loss of consortium. They could also recover the reasonable costs of rearing the unplanned child, but that recovery must be offset by the value of the child's aid, comfort and society during the parents' life expectancy. In an effort to prevent excessive awards, the court directed that such actions be submitted to the jury with a special verdict form and explanatory instructions.

Because the trial court did not use the special form, the Supreme Court reversed the jury award and remanded the case for a new trial limited solely to the issue of damages. The Supreme Court ordered the trial court to instruct the jury to offset the value of the child's comfort, aid and society against the projected rearing costs.—*Sherlock v. Stillwater Clinic,* 260 N.W. 2nd 169 (Minn. Sup. Ct., Oct. 14, 1977; rehearing denied, Dec. 13, 1977).

Court Grants Patient's Request for Her Records

A patient who was contemplating a dental malpractice suit had a "property right" sufficient to afford her reasonable access to her dental records, a New York trial court ruled. In an affidavit, the patient's attorney said that the records were needed to determine whether the diagnostic and dental care rendered was properly administered. The court said that the patient did not have to first file a malpractice suit, she could gain access to her records by court order. The court concluded that the patient had shown a sufficient factual basis for pre-litigation discovery of her dental records. The court, therefore, granted the patient's application for the order directing her dentist to produce her records.—*Application of Striegel,* 399 N.Y.S. 2d 584 (N.Y. Sup. Ct., Nov. 14, 1977). *Capsule Reviews, THE CITATION, Vol. 37, No. 1/April 15, 1978.*

Fetus Not Considered A "Child" Under Child Harm Law

The conduct of a mother who continued to take heroin during pregnancy and failed to seek prenatal care did not constitute felonious harm to a child, a California appellate court ruled.

During pregnancy, the mother, who was addicted to the use of heroin, was warned by a public health nurse that if she continued using heroin and did not have prenatal care, she would endanger the health and life of her child. She disregarded the advice, and the twin boys she gave birth to were addicted to heroin and suffered withdrawal.

The mother was charged with felonious harm to a child, so she sought a writ of prohibition. The court found that an unborn child was not held to be a human being under the California murder and manslaughter statutes, was not a person under the Fourteenth Amendment, and was not a minor or dependent child in the California failure to provide statute or the federal aid to Families with Dependent Children statute.

The punishment in the law regarding endangering a child was more severe than in the law for aborting a fetus, the court pointed out. If "child" in this instance also referred to a fetus, the punishment for endangering a fetus would be greater than that for aborting it.

The court said that where the legislature intended to include a fetus or unborn child within the protection of a penal statute, it had expressed that intent in specific and appropriate terms. Therefore, the court found that the word "child" in the child-endangering law did not refer to an unborn child. Since it was not contended that the mother had done anything to endanger the children after their birth, the court entered an order restraining the lower court from further proceedings.—*Reyes v. Superior Court of the State of California In and For the County of San Bernardino,* 141 Cal.Rptr. 912 (Cal.Ct. of App., Nov. 1, 1977).

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More About Podiatric Hospital Privileges

EDITOR'S NOTE: *In the May issue of* Connecticut Medicine, *we published a section on hospital privileges for podiatrists. Among the articles was a decision of the U.S. Court of Appeals, 5th Circuit, upholding the appeal of a podiatrist who claimed he had not received procedural due process by the hospital and by the medical staff in their refusal of his application for privileges. The court agreed and remanded his case back to the trial court with instructions that the hospital give Dr. Shaw, the podiatrist, a hearing of his application consistent with procedural due process.*

This was done, and after a procedurally fair hearing as determined by the lower federal court, his application was denied on the ground that the "Hospital's decision to exclude podiatrists from staff membership was founded on a reasonable basis."

In addition I include the latest and present regulations concerning podiatrists as formulated by the Joint Commission on Accreditation of Hospitals.

Public Hospital May Deny Privileges to Podiatrist

Shaw v. Hospital Authority of Cobb County

A hospital was entitled to summary judgment in an action by a podiatrist who claimed he was improperly denied staff privileges, a federal trial court in Georgia ruled.

The podiatrist claimed that the public hospital denied his substantive and procedural due process rights by denying him staff privileges. The hospital's bylaws defined a physician eligible for staff membership as one who held a full-practice license or a duly licensed dentist. He also claimed he was denied equal protection because dentists, but not podiatrists, were given staff privileges.

On remand from an earlier appellate court decision, the podiatrist was afforded a hearing before the medical staff and the hospital authority. That hearing also resulted in a denial of staff privileges. Reviewing the decision by the hospital, the trial court said that the hearing complied with procedural due process requirements. The hospital's decision to exclude podiatrists from staff membership was founded on a reasonable basis.

An orthopedic surgeon testified that orthopedic physicians could treat patients for the same conditions as podiatrists and could better serve the patient's needs by treating physical and emotional causes that a podiatrist could not treat, the court said.

The court noted that the podiatrist was not deprived of his livelihood by being denied staff privileges at the public hospital. The podiatrist had testified that he practiced at several accredited hospitals in the area, as well as at his own offices.

The court granted summary judgment for the hospital.—*Shaw v. Hospital Authority of Cobb County,* Civil Actions No. 18627 and No. 76-991A (D.C., Ga., Nov. 1, 1977). THE CITATION, April 15, 1978.

Medical Staff (Podiatrists)

Podiatrists who are appropriately licensed may be granted clinical privileges that are based on their documented training, experience, and current competence. Podiatrists must comply with all applicable medical staff bylaws, rules and regulations, including the procedures governing qualifications, method of selection, and the delineation of privileges. Their request for privileges shall be processed through the normal medical staff mechanism to the governing body, which shall have final approval. When privileges are granted to podiatrists, the medical staff bylaws, rules and regulations must contain specific references to podiatric services. A podiatrist with clinical privileges may, under conditions defined in the medical staff bylaws, rules and regulations, initiate with the concurrence of a physician member of the medical staff the procedure for admitting or discharging a patient. Admission of a podiatric patient shall be a dual responsibility of the responsible podiatrist and a physician member of the medical staff. Podiatrists granted clinical privileges shall be assigned to an appropriate clinical department or service.

Surgical procedures performed by podiatrists shall be under the overall supervision of the chief of surgery. In hospitals that have no chief of surgery but instead have a medical staff operating room committee, this supervisory function shall be the responsibility of the chairman or a designated member of the committee, provided he is a qualified physician. The scope and extent of surgical procedures to be performed must be defined for each podiatrist individually, and shall be recommended in the same manner as all other surgical privileges. Podiatrists may write orders and prescribe medications within the limits of their licensure and of the medical staff bylaws, rules and regulations.

Patients admitted to the hospital for podiatric care shall receive the same basic medical appraisal as patients admitted for other services. This includes the performance and recording of the findings in the medical record by a physician of an admission history and physical examination. The podiatrist is responsible for that part of the history and physical examination which is related to podiatry. A physician member of the medical staff shall be responsible for the care of any medical problem that may be present on admission or that may arise during hospitalization of podiatric patients. The physician responsible for evaluating the general medical status of a podiatric patient shall determine, with consultation if necessary, the overall risk assessment and effect of the operation on the patient's health.

NOTICES

First Connecticut Occupational Medical Association—Yale Joint Seminar on Occupation Health

Wednesday, January 10, 1979
3:00 - 5:00 P.M.
Harkness Hall
Yale Medical School
333 Cedar St. New Haven, CT

3:00-3:30 Lewinsohn, Hilton C., MB., BCh., D.I.H., MFOM
Asbestos Related Diseases in Industry
Corporate Medical Director
Raybestos-Manhattan, Inc.
100 Oakview Drive, Trumbull, CT 06611

3:30-4:00 Gee, Bernard, M.D.
Health Screening for Past and Present Asbestos Workers
Department of Internal Medicine
Pulmonary Section
Yale University School of Medicine
333 Cedar Street, New Haven, CT 06510

4:00-4:30 Lewis, John M.D.
Asbestos—Public Health Implications
Division of Preventable Disease
Connecticut State Health Department
79 Elm Street, Hartford, CT 06115

4:30-5:00 Panel Discussion

Fee for the seminar is $5.00, payable at the door; students free.

Further information may be obtained from Dr. J. Wister Meigs, Connecticut Cancer Epidemology Unit, 30 College St., New Haven, CT 06510; or by telephone (203) 436-8904.

Connecticut High Blood Pressure Program: the First Three Years

DAVID A. D'ATRI, PH.D.

Introduction

Few would question the statement of Jeremiah Stamler that "hypertensive disease is a mass public health problem in the United States—one of the most important, if not the most important affliction producing premature sickness, disability, and death in our adult population."[1] Recent estimates place the number of hypertensives between the age of 12-74 years at 23.4 million.[2]

Over the last four years, there has been a great flourish of high blood pressure screening programs. Programs of screening, detection and referral for high blood pressure have reached over 10 million Americans.[3] Public education through mass media has probably reached millions more.

The large number of persons reached by such programs is primarily the result of three factors:

1. Widespread appreciation by physicians, and voluntary and governmental health agencies of the value of treating high blood pressure and the adverse effects on health and survival of untreated hypertension.

2. A growing awareness among potential screenees, the American public, that high blood pressure is bad and can be treated successfully.

3. The fact that large numbers of people can be screened for high blood pressure in a short time, at little expense and by persons with limited health knowledge.

A clear rationale for treating and the ease of detecting hypertension in large groups do not alone assure that such screening programs are successful. Unless the hypertensives identified enter treatment and have their pressures lowered over long periods of time, screening for high blood pressure has questionable value.

It has been difficult to determine the impact on health of the widespread practice of hypertension screening. With few exceptions, the data provided by screening agencies have not answered the following questions:

1. Did the program favorably affect the public's knowledge and attitudes toward high blood pressure?

2. What proportion of those referred for treatment followed through by going to the site referral?

3. What proportion of those hypertensives at screening was also hypertensive at the site of referral?

4. What proportion of those hypertensives at referral was placed on treatment? What proportion stayed in treatment and was such treatment effective in lowering blood pressure?

5. Did the programs of public education, screening and referral reduce morbidity and mortality from diseases related to hypertension in the geographical localities served?

The essential and obvious criterion for success of such programs is a reduction in morbidity and mortality, but it is important also to understand the outcome of the intermediate steps of education, detection, referral and treatment.

The Connecticut High Blood Pressure Program (CHBP) whose organization was previously described in this journal[4] has answers to these questions about its efforts. The purpose of this paper is to present an evaluation of the first three years of the program, January 1974—December 1976.

Methods

The objective of the program was the reduction of death and disability from hypertension-related diseases through public and professional education and detection, referral, and follow-up of the estimated 300,000—400,000 people in Connecticut with high blood pressure. Guidelines were developed by participating agencies for the screening program and

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DAVID A. D'ATRI, Ph.D., Assistant Professor of Epidemiology and Public Health, Yale University School of Medicine.

for the computerized registry that was established to monitor followup and to evaluate CHBP.

The functions of the registry were:

1. To help determine the best kind of screening sites in terms of numbers reached, proportion screened who were black or older, and therefore more likely to be hypertensive, and sites whose referrals were more likely to get treatment.

2. To determine, after referral, the proportion of persons referred for hypertension who received treatment and the proportion remaining in treatment at specified intervals.

A central part of CHBP is its component of public education. This component consisted, in part, of TV programs, movies, talk shows, audience call-ins about high blood pressure, newspaper articles and speakers bureaus which provided speakers to both professional groups and to the public.

The screening sites were industries, hospitals, health departments, colleges, supermarkets, shopping centers and town halls. The persons screened consisted of all those who came to the screening sites and participates in the program. No limitation of age, sex, race or address was placed on participation. Follow-up was maintained by computer-generated letters and postcards to the hypertensives and their physicians.

It was postulated that if the program of public education were successful, there would be a steady increase in the degree of awareness of disease and adequacy of treatment among the hypertensives identified at screening in each successive six month period of the program. Adequate treatment means blood pressure below 160/95. The relationship between awareness and adequacy of treatment on the one hand and time of screening on the other was examined statistically through the use of log-linear models. In order to test the hypothesis that mortality rates from diseases related to hypertension in Connecticut lowered in temporal association with the activities of CHBP, an analysis of variance was performed on the age-adjusted mortality rates of ischemic heart disease (ICDA 410-414) and cerebrovascular disease (ICDA 430-438) for men and women on the years 1969 through 1976.

Results

From January 1, 1974 to December 31, 1976, 273,000 persons were screened. For purposes of this report, only those persons screened using the standard procedures and forms, 178,807 in number, are included in the presentation of data.

The majority of persons screened were women, 57%. The percent of Whites, Blacks, and Hispanics among those screened were 92.1%, 6.5%, and 1.4% of the total respectively. These are virtually the proportions of these groups in the 1970 census of Connecticut. At the end of its first three years, CHBP had screened some persons in every one of the 169 towns in the state.

Screening and public education sites at shopping centers and supermarkets, originally intended to reach Blacks and Hispanics, recruited large numbers of participants in the first few days of their operation but local shoppers consistently lost interest after 10 days or less, even though the number of passers-by remained large. Registry data indicated that blood pressure booths at fairs, exhibits and picnics interested only a tiny minority of participants and were least successful in getting detected hypertensives to follow up on referral and enter treatment. The most convenient, manageable and successful screening sites were industries and schools in which workers, faculty and staff could be screened. In such settings, more than half of all persons eligible to participate did so. Participation rates at some sites exceeded 90%. In such settings, the target population was known precisely, adequate physical facilities were almost always present and the encouragement to participate by the administration resulted not only in high screening rates but in good results after referral. In larger industries (1000 or more employees) with medical departments more than 88% of hypertensives entered some form of treatment within 60 days after referral.

Of the 178,807 persons in the registry, 55,232 are "hypertensive." Hypertensive persons identified included those whose pressures exceeded the specified levels (for persons under age 40, a hypertensive person is one whose systolic pressure at screening equalled or exceeded 140 mmHg *and* whose diastolic pressure equalled or exceeded 90mmHg; for persons aged 40 or older, a hypertensive is one whose systolic pressure equalled or exceeded 160 mmHg *and* whose diastolic pressure equalled or exceeded 95 mmHg) as well as persons on anti-hypertensive regimens whose blood pressures were below those levels. Hypertensives were classified as aware or unaware of their disease, receiving some form of treatment or not and as to whether treatment reduced pressures to below 160/95 (adequate) or not (inadequate).

Eighty-seven percent of persons identified as hypertensives and referred to sources of care actually visited that source of care. In about 96% of cases, a private physician was the source of care to which the patient was referred.

Physicians to whom hypertensives were referred agreed that high blood pressure was present in 73% of persons referred who were in the "not aware" or "aware—no treatment" category. Persons referred who were in the "aware-inadequate treatment" category had already been identified as hypertensive by their physicians and agreement would have been expected in that group. The referral physicians' criteria for hypertension—and therefore for agreement or disagreement with our designation—were their own.

The program of public education was evaluated by the registry data. The hypothesis tested was that if public education were successful, there would be, among persons screened, a steady increase over the three years of the program in the proportion of hypertensives aware of their disease and in hypertensives adequately treated.

As indicated earlier, log-linear models were used to explore this hypothesis, based on the awareness-adequacy of treatment by period of screening data, cross-classified by age, sex and race. The findings of these investigations can be summarized as follows: the association between awareness-adequacy of treatment, time of screening, sex, and race varied according to age. With the two age groups 35 to 49 years and 65 years or older, the proportions of hypertensives aware of and adequately treated for their condition distinctly increased as time progressed, and this trend was independent of sex or race. In both of these age groups, however, females were generally more likely to be aware and adequately treated than were males. For those hypertensives screened at 50 to 64 years of age, the relative proportion of males who were aware and adequately treated was small in 1974 but subsequently increased. For females, the reverse pattern emerged. For the most part, race was not related to either awareness-adequacy of treatment or change in awareness-adequacy of treatment over time.

The analysis of variance of the mortality data shows a clear sex by disease category interaction term but the effect of year on mortality rate is independent of these. For ischemic heart disease, the mortality rates in the years 1969-73 were not significantly different from each other but were jointly significantly higher ($p. < .05$) than the rates for the years 1974-76. A similar but not quite statistically significant pattern ($p. < .10$) was noted in regard to cerebrovascular disease. In general, during the three years of CHBP, hypertension-related mortality rates in the state were substantially lower than in previous years.

Discussion

The statistically significant decline in hypertension-related mortality during the first three years of CHBP and the striking changes in awareness and the control status of the population screened cannot with present evidence be attributed to the CHBP program alone. U.S. vital statistics show declines in hypertension-related mortality in other states. If, however, mortality rates had not changed or increased after three years of intense effort by CHBP, or there had been no change in awareness and control of the screened population, the value of the program would have been questionable.

Summary

The Connecticut High Blood Pressure Program (CHBP) of public and professional education, screening, referral and follow-up screened about 273,000 persons in its first three years, 1974-76. Of these 273,000, standard data for 55,232 hypertensives were analyzed. About 87% of persons identified as hypertensive and referred to a source of medical care visited that source. Physicians to whom hypertensives were referred agreed with the diagnosis in 73% of cases and placed 98% of those they diagnosed as hypertensive on treatment or a regimen of regular follow-up.

The proportion of hypertensives identified at screening who were in the "aware-adequately treated" category increased dramatically and significantly in the first three years of CHBP, although this trend varied somewhat by age and sex. Mortality rates from hypertension-related disease, ischemic heart disease and cerebrovascular disease, were substantially lower during the years 1974-1976 than in previous years.

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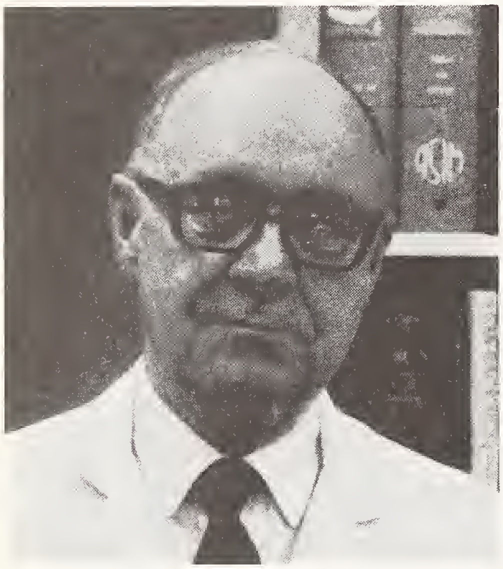
"THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY."

—Dr. William Felts, Past President,
American Society of Internal Medicine



More and more physicians today are beginning to realize the extent of the economic influence they have, and are finding ways of holding costs down.

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More physicians today realize what a tough problem we're all faced with. They know this is a challenge for medicine. And that physicians are in the best position to deal with and solve the problem.

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Coordinated Home Health Care: Bringing Hospital Services to the Patient's Home

DIANE J. MATURO

Coordinated Home Health Care, a physician-directed program to extend hospital services to patients in the home setting, is included in hospital benefits for all Blue Cross & Blue Shield of Connecticut members under age 65 and not eligible for Medicare.

Skilled professional care in the home following inpatient hospitalization provides psychological and rehabilitative stimuli. Coordinated Home Health Care makes available hospital services in the home for patients who can be discharged earlier than would otherwise be possible, and it can also be used in lieu of inpatient care in some cases. In this way the cost of hospital care is reduced and hospital beds are made available for others who require inpatient treatment.

The attending physician determines whether a patient is suitable for home care, issues written orders for home care before the patient is discharged from the hospital and continues medical supervision of the patient. In participating hospitals home care is administered by a professional Home Care Coordinator. Cases for home care can be selected from a variety of diagnoses and age groups, such as post-surgery, post-fracture and recovering coronary and stroke victims. Coordinated Home Health Care is also suitable for some chronic disease or terminally ill patients for whom treatment in the home setting is preferable.

Home Health Care benefits are provided in conjunction with approved hospitals and state-licensed, Medicare-certified Home Health Agencies. Participating hospitals bill Blue Cross & Blue Shield of Connecticut directly for all services, while bills are sent directly from member Home Health Agencies when the patient is treated by a non-participating hospital.

Eligibility for Coordinated Home Health Care requires that the patient have a medically necessary hospital stay or illness which would require hospitalization, have written orders and continued supervision by the attending physician, be essentially homebound, require intermittent professional nursing and/or rehabilitative physical therapy and home care services directly related and necessary to a current illness and have an active membership in a Blue Cross & Blue Shield of Connecticut hospital plan.

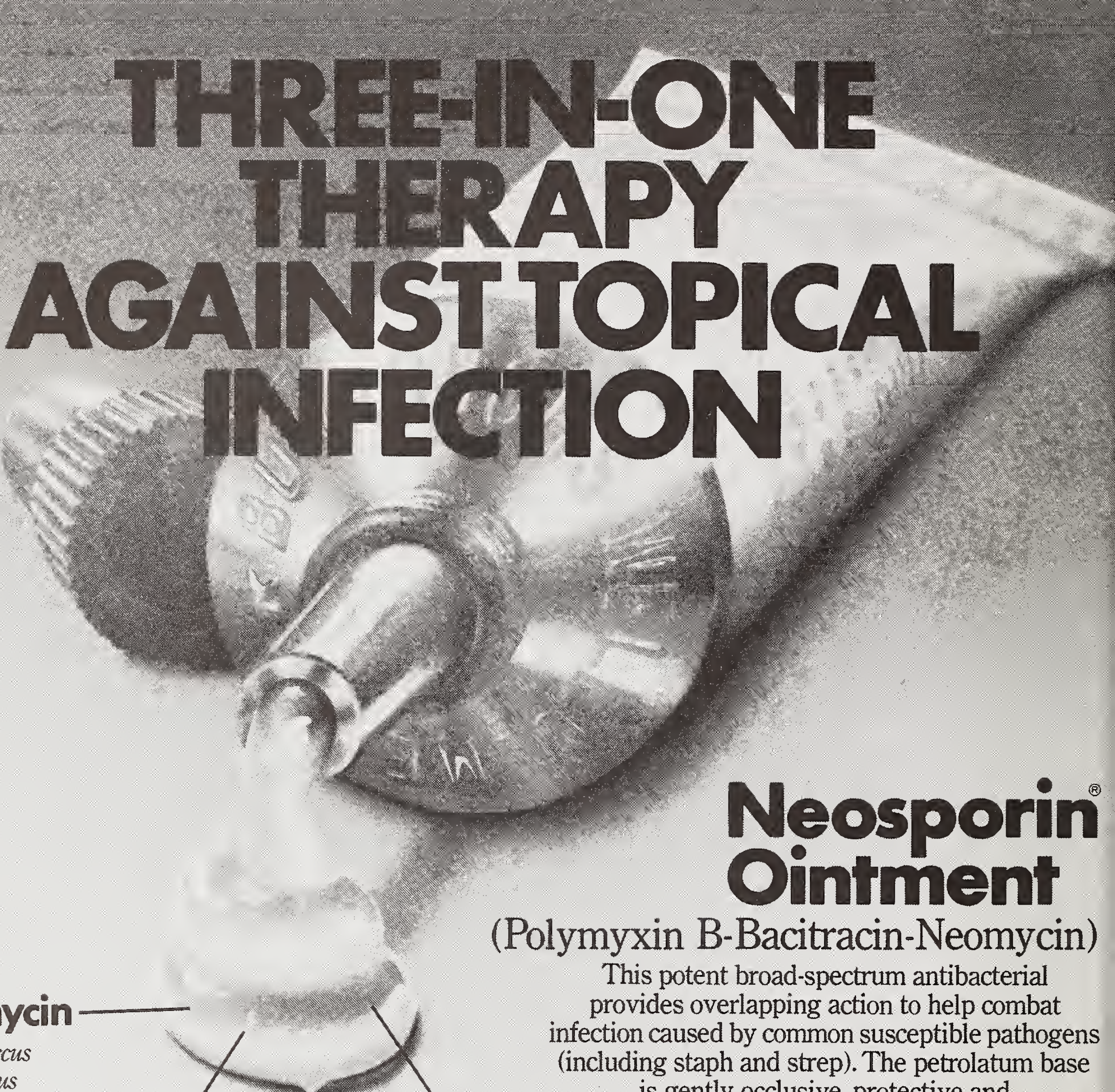
Coordinated Home Health Care provides a total of 200 home health visits per calendar year, regardless of the number of inpatient days the patient has used. Each professional trip to the home is counted as one visit. Of the 200 maximum visits, 80 may be used for visits by a home health aide.

A wide variety of services can be included in the home health care program prescribed by the physician, such as nursing, paramedical services including physical therapy, occupational therapy and speech therapy, home health aides, laboratory tests, x-rays, electrocardiograms, inhalation therapy, oxygen, medicines, dressings, rental of durable medical equipment and transportation by ambulance or "medicar" between the patient's home and the hospital.

Treatment of nervous-mental disorders, communicable diseases, tuberculosis, drug addiction, alcoholism and normal pregnancy is excluded from Home Health Care benefits. Physicians' services, custodial care, private duty and housekeeping services and any benefits provided by Medicare are not covered by the Home Health Care program.

DIANE J. MATURO, Public Relations Representative, Blue Cross & Blue Shield of Connecticut, North Haven, CT.

Further details regarding the Coordinated Home Health Care program may be obtained by contacting Bernard Fielding, Provider Relations Department, Blue Cross & Blue Shield of Connecticut.



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PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Month in Washington

After a bizarre forty-eight-hour-long swan song, the 95th Congress frantically adjourned leaving dead in its ashes most of the Carter Administration's major health proposals.

The leading casualty among the health bills was a hospital cost containment measure. Unexpectedly gaining Senate passage in a watered-down fashion late in the session, the Administration and its congressional leadership pulled out all stops to whisk it through the House. But strong opposition by a number of House members who refused to be stampeded and the concerted effort of the American Medical Association, the American Hospital Association, and other health groups kept the President's much-wanted measure from passage.

The rebuff to the Administration was a smashing victory for health care providers, including the AMA, and was especially sweet to the nation's hospitals which had been subject to bitter tirades from Health, Education and Welfare Secretary Joseph Califano. "Obese," "lazy," "bloated" were adjectives hurled at the hospitals by Califano, who also labelled the Voluntary Effort (VE) to bring down hospitals' costs as a "sham and an impostor."

Also left in the paper rubbish on the Hill were the Child Health Assessment Program, clinical laboratory regulations, drug law reform, and a rewrite of the health planning law, the latter gaining a second one-year extension.

Senator Herman Talmadge's (D-Ga.) carefully worked plan to reshape Medicare-Medicaid reimbursement for hospitals through prospective reimbursement also received the ax in the turmoil of the adjournment.

Two provisions sought by the AMA also failed when the bills to which they were attached became mired. One of the AMA proposals would have repealed section 227 of the Social Security Act placing a limit on the reimbursement of teaching physicians. Approved by the Senate as a part of the Hospital Cost Containment Bill, it was never attached to another suitable vehicle after the hospital bill was doomed in the House. Another AMA-backed initiative would have amended the Professional Standards Review Organization (PSRO) law to protect PSRO data from disclosure under the Freedom of Information Act. The Senate could not get around to this provision which was made part of a Medicaid assistance bill which died because of time limitations.

Prepared by the Washington, D.C.
Office of the American Medical Association

The $56 billion appropriations bill for the Labor and Health, Education and Welfare Departments passed after adoption of compromise language covering federal funding for Medicaid abortions. The Health Services Bill containing authorizations for many public health service programs such as mental retardation and teenage pregnancy did clear the Congress. A provision for aid to hospitals to set up primary care centers was reduced to a demonstration program while the Health Maintenance Organization program was extended, but with less funding than the Administration sought. Aid for biomedical research also was approved and sent to President Carter.

An angry confrontation took place on Capitol Hill when the AMA met head-on with Sen. Edward M. Kennedy's (D-Mass.) proposal for national health insurance (NHI). The AMA charged that the Kennedy-Labor scheme for NHI would bring about total federal domination of health care in this country.

"We do not find such a program to be in the interest of the citizens of this country," said James Sammons, M.D., executive vice president of the AMA.

William Felch, M.D., chairman of the AMA's Council on Legislation told Kennedy:

"The total federal takeover of the health care system is inescapable under this program. In our opinion we do not think the American public will want its health care directed and controlled by the federal government. The history of federally-run programs does not instill such trust and confidence as to support such action."

The confrontation took place before Kennedy's Senate Human Resources Subcommittee on Health on the second day hearings on the outline of a new NHI plan recently proposed by Kennedy. At the opening session, Kennedy heard from six people from Canada who had severe medical problems and from six Americans. He contrasted the high out-of-pocket costs to the Americans with the total government payment of the costs in Canada, declaring that "if these differences between the United States and Canada don't move the people of this nation, then nothing can . . . ."

The hearing was described by Kennedy as "the first serious congressional debate on National Health Insurance. It will last for many months. It will be carried to every part of this nation."

Dr. Felch noted that Kennedy's plan would impose strict controls on hospitals and physicians through revenue and expenditure limits on hospitals and physicians.

"Manifest is the inherent unfairness of subjecting one industry to stringent cost controls without likewise controlling the factors that affect the costs in that industry," said Dr. Felch.

"Again, it is grossly inequitable to single out a segment of our society and economy for discriminatory controls. This on its face would be objectionable."

The heart of the Kennedy-Labor proposal sets national maximum budget levels of expenditures for health care together with similar maximum areawide and state budgets. Hospital budgets and physician fee schedules would be negotiated annually.

This budgeting process would be controlled through a new federal agency called the "Public Authority."

The attempt is to make the health system learn to live within a budget, Dr. Felch said. "The inescapable result of such a budget is 'rationing' of health care," he warned.

"The point is we agree with you that health care costs must be kept in reasonable balance, but we urge the Congress not to fall into the 'cost containment trap'—the belief that cost control is more important than the alleviation of human misery and suffering."

Dr. Sammons told Kennedy that the AMA shares the concern of proponents of NHI proposals that health care should be available to all persons. He pointed out that the AMA developed a bill in the 95th Congress—the Comprehensive Health Care Insurance Act—that provides comprehensive and catastrophic coverage for all persons, and is founded on the strengths of its existing health system. "Its foundation is solidly based upon the successes of our entire health delivery system, allowing for future development and innovation," Dr. Sammons said.

The AMA official testified that during the long period of NHI debate a number of significant changes have taken place in the health system. These include a marked increase in numbers of medical schools; a significant expansion in medical graduates; a substantial increase in training of allied personnel; a proliferation of medical facilities; development of sophisticated technology; wider distribution of medical personnel; expansion of government supported health programs; increased access to care by the disadvantaged; and wider coverage of private health insurance, including catastrophic coverage.

"Thus while the debate has waxed and waned, our health delivery system has shown steady improvement," he said.

The AMA witnesses' appearance was marked by several sharp exchanges with Kennedy. The Senator took issue with Dr. Sammons' statement that Kennedy's bill would result in a total federal takeover. The witness suggested that Kennedy read his bill again.

Kennedy also complained about the AMA's assertion his bill would lead to rationing of health care. Dr. Sammons replied that when fixed budgets and ceilings are established coupled with increased demand, somewhere along the line there will be people who are not receiving services.

Dr. Sammons told the subcommittee that while there are drawbacks in U.S. health care, it is "superior to any other in the world."

* * * *

The rupture between the Carter Administration and organized labor on NHI goes unrepaired.

HEW Secretary Califano refused to accede to Labor's demands that the Administration tailor its NHI plan to Labor's scheme. The crucial difference is Labor's insistence that NHI be implemented in one fell swoop; the Administration wants it done in stages.

Califano earlier told the Senate Human Resources Subcommittee that: "The President believes that a program this complex—affecting the nation's third largest industry which employs six percent of the entire work force and having profound implications for federal, state, and local budgets—must be phased in with singular care and sensitivity to the economy, governmental budget and the administrative complexity of the health care system."

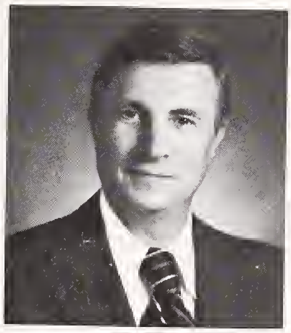
Califano also indicated the Labor-Kennedy plan would be too costly, pointing to the $30.8 billion addition to the federal budget by 1983 contemplated by the plan, a figure soft-pedaled by the Labor forces. "We all want the costs of a national health plan to be 'tolerable,' but the American people obviously must know specifics before they can reach a conclusion," said Califano.

* * * *

The Voluntary Effort has received support from two high Carter Administration officials. During a meeting of the National Steering Committee on Voluntary Cost Containment in Washington, D.C., Barry Bosworth, chairman of the Council on Wage and Price Stability, and Robert Strauss, special counsel to the President, said that President Carter "wanted us to come here today to encourage you in your efforts to contain health care costs." Although the Administration failed to obtain enactment of hospital cost containment legislation, Strauss said the Administration recognizes the significant progress of voluntary programs in the fight against inflation.

The President's Page

Status Report on Continuing Medical Education



The purpose of education is the search for wisdom. It is an endeavor to be undertaken with love and not one to be accomplished easily under duress. Perhaps physicians have rushed too headlong to prove they were the "good guys" by showing they did keep up. Relicensure and recertification proves two things. First, it may prove that a person can pass exams and secondly that he has a certain amount of knowledge. But society wants three things to be guaranteed by re-certification and relicensure as politicans seem to have determined it. First, it is to be guaranteed that physicians are competent, secondly that they will apply their competence in timely and appropriate fashions and third, that the cost of health care will be reasonable. If you begin to be uneasy, you are correct. Education is not capable of guaranteeing such things nor intended to do so. We all know of very bright men who could practice better medicine than they do and others, less brilliant, who practice superbly due to industry, dedication and love for what they do and the people they serve.

And where were these ideas expressed? In Chicago, at the recent AMA Annual Conference on Continuing Medical Education. I was privileged to participate in a panel to present Connecticut's experience with mandatory CME as a condition of membership. You can be proud of Dr. Vincent DeLuca and his CME Committee which did the study that showed the high level of CME activities of our members and the lack of need for mandation. In CME there had been much talk of deficiency and needs and few studies like ours. The facts were a refreshing change from feelings and beliefs.

Currently, it seems that around the country there is a swing towards the position of this Society. To be effective, CME must change the physicians' behavior permanently. No specific type of education has yet been shown to do this reliably. The measurement of practice behavior is at this point technically not practical though potentially possible. Moreover, education is being perverted into a weapon of discipline and punishment and used for ends improper at the least. CME is a two billion dollar a year business and is looked upon avariciously by our academic colleagues who see in a percentage of this business, their fiscal salvation. This is said to be the source of the problems in the new Liaison Committee on CME. It is not what is right and proper, as you would hope, but dollars that motivate, sad to say. I am pleased to inform you that the CSMS once again has been in the cutting edge of important changes. I can think of few things of more concern than mandatory recertification and relicensure, burdensome at the least, but an absolute horror if they cannot achieve the ends demanded. It is suggested competency not brownie points and honesty not the passage of exams are what need to be measured and guaranteed. How to do this may not be within the competence of the politicians or bureaucrats and perhaps not within the capability of medical societies, as currently structured.

Jerome K. Freedman, M.D.
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Reflections from the Dean's Office

Crises Within Crises

ROBERT U. MASSEY, M.D.

There are fashions in crises, as there are fashions in diseases; the crisis-a-month or disease-a-month interrupts honest work and solid achievement. In this decade we have had an energy crisis, an environmental crisis, several dollar crises, a population crisis, swine flu, and Watergate.

There has been a continuing crisis in medicine for over a decade; in fact there has been a series of crises: too little primary care, too few physicians, too much specialization, improper distribution of physicians, questions about quality, and rapidly increasing costs. Inside all of these are suborders of crises: human experimentation, emergency medical services, death and dying, nursing home care, recombinant DNA research, foreign medical students, malpractice, government regulation, too many physicians, and advertising. There are scores of others, many of which might not qualify, but with proper handling by those who create public opinion could readily be worked into respectable, or even formidable, crises.

It is not helpful to say that a crisis is not real, that it is only in our heads, and that in a month, or year, or decade it will have been forgotten. Crises, after all, make political issues which lead to actions that become in turn historical events, or at least political events. These are sometimes good, more often mischievous, rarely neither.

I recently asked an economist if there was, in fact, a crisis of medical costs. He said, politely, that mine was a silly question and that since it was evident to both of us that most people thought there was a crisis, there had to be one. We then talked about prices, costs, total revenues, quantity, true costs, and marginal costs and agreed that, unless the terms were defined and, more importantly, we said precisely what we meant, there could never be agreement about the nature of the crisis, its causes, and for whom it was critical.

A recent article in *Business Week*[1] called health care the "second largest and fastest growing industry in the United States." Applied to anything else, especially from the usual standpoint of *Business Week*, that would be a compliment. It clearly was not intended as one.

Medical schools have been expected to turn their efforts and resources time and again to most of these crises in medicine. The number of students now entering medicine is almost double the number admitted fifteen years ago, which makes a new crisis. More than half of the seniors are electing graduate programs in primary care, and 93 medical schools have departments or programs in family medicine. Philosophers, ethicists, theologians, and lawyers are joining medical school faculties and students are calling for seminars in medical history.

Novel schemes to make students, residents, and faculty members aware of costs are part of the programs in many teaching hospitals, and clinical teachers are trying to turn outpatient medicine into good education.

All of this is laudatory, but medical schools need to be mindful that as faculties of universities they are to conserve as well as to accumulate knowledge, to stabilize as well as to change. Medicine and science, medical schools and universities will be around long after the crises have been forgotten or rather replaced by new ones. It is well to retain a sense of distrust of climates of opinion, and, although it may be easier for a professor of medieval studies to ignore the world than for a professor of medicine to avoid making changes in his residency program because of the primary care crisis, Emerson's admonition to the scholar applies to the whole faculty:

"The world of any moment is the merest appearance. Some great decorum, some fetish of a government, some ephemeral trade, or war, or man, is cried up by half of mankind and cried down by the other half, as if all depended on this particular up or down. The odds are that the whole question is not worth the poorest thought which the scholar has lost in listening to the controversy. Let him not quit his belief that a popgun is a popgun, though the ancient and honorable of the earth affirm it to be the crack of doom."

ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut School of Medicine, Farmington.

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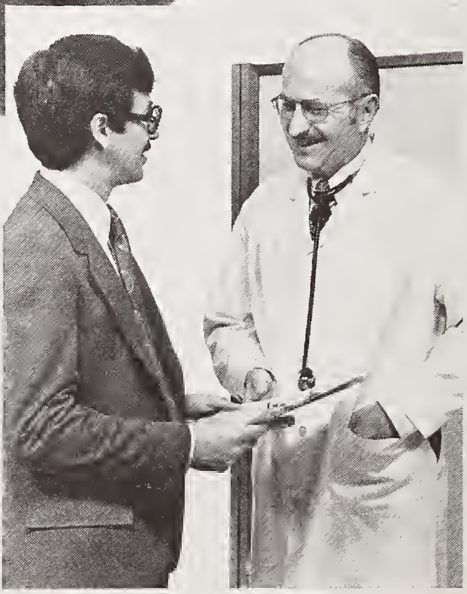

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EDITORIALS

Age and Bed Needs

Planning requires the ability to estimate future needs on the basis of current information. The Connecticut Hospital Association (CHA) has made an attempt to project future acute hospital bed needs in Connecticut by applying the current age-specific utilization rates (ASUR's) to population projections for Connecticut for 1981, 1986, and 1991. They conclude that Connecticut will soon have a net deficit of acute hospital beds.

The authors make an important and valid point, that both discharge rates and length of stay vary considerably by age, and, therefore, it is more valid to estimate total utilization as a weighted average of the component age-specific utilization rates, a process analagous to standardizing the crude death rate. The "weights" given to the various ASUR's are the number of persons in the different age groups, and for this CHA use the population projections available from the Connecticut State Department of Planning and Energy Policy. No details are given on the way these projections were calculated, but predicting the future size of adult populations is feasible because (omitting net migration or major disaster) the application of a recent life table to the current population gives good estimates of the immediate future. If the migration assumptions used in the population projections are reasonable, this component of CHA's estimates can be accepted.

Far less certain is the relationship of current ASUR's to future utilization. The authors are aware of this problem and list several forces which may cause future utilization of acute general hospitals to change, probably in the direction of lower ASUR's. Such forces include: ambulatory surgery, HMO's, changing technology, converting underused pediatric and obstetric beds, changing bed definitions, regionalization, new building programs, and changes in community resources, such as home care, Hospice, and extended care facilities.

Another major limitation of the approach is that patients are not admitted to hospitals because they are of a certain age; they are admitted and treated for certain diseases. While it is quite true that both the incidence and prevalence of certain diseases are related to the age of the patient, the age is not usually the causative factor for the admissions. Many of the diseases that are more frequent among the aged differ in whether or not they may effectively be treated in alternative modes. A concentration on the factor of age rather than the specific medical conditions reduces the possibility of estimating the effect of alternative treatment modes on the future behavior of the age-specific utilization rates.

Another potential problem with the CHA report is the occupancy rate used to determine when a level of "shortage" is reached. The 80% occupancy target is a hospital-wide rate and depends upon the individual institution's mix of adult medical and surgical beds, pediatric beds, newborn beds, and psychiatric beds. Adult medical and surgical as well as psychiatric beds can be operated at much higher occupancy levels than maternity or pediatric services. If the federal planning guidelines are successfully applied to these two latter services, then the overall occupancy criteria should be increased.

A fourth issue is whether the Connecticut-wide data are relevant to the planning within a given HSA or for an individual hospital. The potential shortfall of beds will undoubtedly be greater in some areas than in others, and the report does not provide data by region.

The authors should be commended for bringing to the fore an important point, namely that shifts in the age composition of the Connecticut population will increase future utilization, unless there are counter-acting forces. However, it should be noted that such an analytic approach must be repeated frequently, based on future patterns of hospital utilization; it would be helpful for CHA to develop a "family" of estimates, depending on different assumptions about future changes in age specific utilization rates. It would also be helpful to derive separate estimates for smaller regions of the state.

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Associate Professor of Public Health

John D. Thompson, M.S.
Professor of Public Health

From the Dept. of Epidemiology and Public Health, Yale Medical School

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Ethics of In-Vitro Human Fertilization

The birth by Caesarean section on July 25, 1978, of a baby to Mrs. Lesley Brown in Oldham, England, conceived from fertilization of one of her ova by her husband's sperm by in-vitro technique, a first in medical history, has produced another bioethical problem to be addressed by the medical profession.

Dr. Robert G. Edwards, an English physiologist, and Mr. Patrick C. Steptoe, an obs/gyn specialist, have been working in this field for over a decade. They reported success in embryo transfer in an article in *The Lancet*, April 24, 1976 (an ectopic pregnancy). At the time of Mrs. Brown's delivery, Mr. Steptoe stated there presently were several other such pregnancies in England. And since then, birth of a "test-tube" baby has been reported from India.

In the United States, a regulation from the Department of Health, Education, and Welfare in 1974 prohibited such research supported by federal grants on ethical grounds. Though the prohibition applied only to federally supported projects, all private work in this field also ceased.

During the next several months, a 14-person Ethics Advisory Board, a congressionally-mandated committee, recently appointed by HEW Secretary Califano, on his instructions is holding public hearings in the ten HEW regions in the country to determine whether on ethical grounds the federal government should support such research. After these hearings, the Board will make recommendations to Mr. Califano who has the authority to prohibit or limit this federal research by regulation. It is not quite clear now how broad his jurisdiction is. Much of the reporting in the press has been misleading in that it does not emphasize that the present prohibition is limited to federally supported research.

The question we physicians should address is: Who and what organization should formulate ethical policy involving the profession? Should it be the profession itself or government as is now being done by Secretary Califano?

The federal government now sponsors more than 60% biomedical research in this country. The budget for the National Institutes of Health has grown from $400,000 in 1937 to a present $2.8 billion. With our American concept of academic freedom, the ideal is government grants without any strings attached. I believe, however, that some academicians now concede that the government can select projects to which it will allocate its funds, and even set up ethical guidelines for federally sponsored research and clinical application. If the federal government should do this, it could mean that it could set up ethical guidelines for 60% of the biomedical research in this country, with in-vitro human fertilization as an example of the process.

Policy on medical ethics and bioethics should be formulated by the profession itself—by the American Medical Association, especially since it recently has input into its House of Delegates, the policy-making body, from over 50 national specialty associations in addition to official representation from the national associations of students, residents, and deans of medical schools. It is reasonable to have nonphysicians participate in or have a meaningful input into the AMA process in the resolution of ethical problems that affect society. I consider in-vitro human fertilization and embryo transfer as one, especially with the many problems involving the possible use of surrogates.

No one should make ethical judgments on scientific problems without some knowledge of the science involved. And physicians and scientists should have some interest in and knowledge of the ethics involved in their work. In our country, the main issue in in-vitro human fertilization is whether "life" begins with fertilization of the ovum. And though many use scientific arguments to justify the concept that life begins with fertilization, the issue is essentially religious. With over 250 religious denominations in our country, it is not surprising that there is no religious consensus. Traditional Roman Catholics, Orthodox and many conservative Jews, as well as Mormons, and some Fundamentalists believe that "life" begins with the fertilized ovum and oppose such experimentation and clinical application. This opposition has concentrated in the Right-to-Life movement. As far as law is concerned, the United States Supreme Court in its recent landmark decision on abortion refused to set a precise time when the developing fertilized egg should be defined as life.

As an interested physician, certainly not as a theologian, I would like briefly to show that in our Western culture and in Christian theology the concept that life begins with fertilization is historically recent. Drawing only on "The Sanctity of Life" by Glanville Williams, an eminent English jurist, we find that for Aristotle life began about 40 days after conception in the male and about 90 days in the female. For Hippocrates, it was 32 and 40 days. The Stoics held that the fetus was not "life" until it breathed at birth. Williams states that "The time was settled in the Roman civil law as 40 days after conception for both sexes, and this time, too, was accepted by Galen." St. Thomas Aquinas in the 13th century held that life started at the moment of "quickening," as did Bracton, his contemporary English common law historian. Both Coke in the 16th century and Blackstone in the 18th, great and influential English jurists, stated that as far as the law was concerned life began with "quickening." Theological concepts have always been important because they often find themselves in the criminal law.

This brief account should be sufficient to show that the precise dating of the beginning of life historically has been characterized by differences of opinion rather than unanimity, even among theologians of the same faith. It is probable that even at present any such definition will be arbitrary, depending on the context, circumstances, and one's viewpoint. For example, those who believe that life begins with fertilization, especially the "Right-to-Lifers," now use as an argument that scientists themselves assert that genetically the human begins with fertilization. This was answered by John D. Biggers, Professor of Physiology at Harvard Medical School, in a recent presentation at a Senate subcommittee hearing on the subject. He stated that "Fertilization in man is merely one event in the unending cycle of life where two living cells, the sperm and ovum, fuse to form another living cell that contains a new selection of genes from the human gene pool. . . . This cell can generate a new human individual. Once again, I emphasize that throughout the entire process, life never ceases. I could equally well set up the other definitions of when life begins. . . . The lesson I wish to stress is that definitions are arbitrary and are not fundamental truths. If certain individuals wish to define a new life as starting with fertilization, they are entitled to do so. But they should not attempt to bolster the validity of the definition by the claim it has scientific respectability."

While the AMA has not formulated any policy on in-vitro insemination or embryo transfer, it has approved in principle, with conditions, abortion and artificial insemination. Since both carry with them ethical issues that can be extrapolated to in-vitro fertilization, it is probable that the House of Delegates would adopt a resolution approving in principle the ethics involved, if such a resolution were introduced. As a delegate, I am introducing such a resolution. It is quite fortuitous that this December convention will give the House of Delegates an opportunity to preempt a pronouncement on the subject by Secretary Califano. This particular issue carries with it significance because it will be the first issue studied by this new Ethics Advisory Board to recommend to Secretary Califano who in turn himself will make an ethical decision to the public and to scientists!

The issue: Should the medical profession or the government establish policies for the medical profession involving medical ethics and bioethics? I say that it should be the medical profession, not the government.

Fred Fabro, M.D.

IPPB—Its Worth?

Dr. Donald Morrison in this issue reports the experience of the Hartford Hospital in intermittent positive pressure breathing (IPPB) therapy. His results are both informative and important. They strongly suggest that the procedure be constantly reassessed, both for efficacy and cost.

It is estimated that between $1 and $2 billion a year are spent on it. A five-year, 1,000-patient study has been begun to ascertain the value of the procedure for chronic obstructive pulmonary disease (COPD).

Some critics say that the IPPB is a waste of time and money. It was a Temple University 1974 conference at which pulmonary specialists called for long-term trials. The $7-million study is being sponsored by the National Heart, Lung, and Blood Institute. Whereas the function of some patients improves, many results fail to demonstrate any benefit from adding IPPB to conventional therapeutic regimes.

Critics of the use of IPPB for stable COPD say there is no solid evidence that the mechanical unit is any more effective in delivering aerosols than simpler, cheaper, hand-type nebulizers. Recently even IPPB pioneer Maurice S. Segal of Tufts was highly critical of unjustified overuse of IPPB on a long-term basis for such stable ambulatory patients. Dr. Waite, also of Tufts, states that its overuse in hospitals in the country is costing hundreds of millions of dollars in avoidable bills *(Medical World News).*

One study says that 2.4 million patients discharged from hospitals in 1977 had at least one IPPB treatment costing from $3.75 to $7.50 each, and daily IPPB charges running from $15 to $96 according to another study. One of the most harmful and extensive practices is the routine order for treatment, especially without a time cut-off.

Dr. Morrison gave his talk at one of the recent meetings devoted to hospital costs, jointly sponsored by the Connecticut State Medical Society and the Connecticut Hospital Association.

Fred Fabro, M.D.

The Federal Second Opinion Program in Connecticut

It requires no genius to understand that the Federal Second Opinion Program is a political answer to the furor generated by the "unnecessary surgery" controversy. Since the existence of "unnecessary surgery" in the vast amount alleged is doubtful, and since "unnecessary" and "elective" have been hopelessly confused, the basic facts on which the program is based is substantially flawed. Moreover the program offered nothing that was not already covered by Federal programs previously. All patients have always been free to consult more than one physician and be reimbursed.

The emotional objections on the part of some of the leaders of the State Medical Society consisted of several different components. First, there was a strong feeling that the government was intruding into physician-patient and physician-physician relationships. The obviously political motivation was resented. The "unnecessary surgery" allegations were detested. Many felt the whole thing was another low blow. While agreeing with most of these feelings, I disagreed with such emotionally-based responses. Rationally, there was plenty of good ammunition. The author of the Cornell study never intended the extrapolation that was made. He, at least, was clear on the distinction between "elective" and "unnecessary" and he had studied "elective" surgery and like us, all, knew that decisions here were always judgmental, at least in part. The use of the word "unnecessary" was something he had not intended be done in the way it was done. The propaganda for the second opinion program implied it was new and free, whereas it was no different than the Medicaid and Medicare programs had been before. The strongest criticisms, in my opinion were these: Despite the trumpeted concern for the patient's welfare, the program did not intend to identify or follow them in any way; and, despite propaganda about cost savings, the program did not intend to evaluate its own cost. In addition, there were no limits on consultation, no limits on replications of studies for tests, and no intention that the first opinion-giver's records be forwarded to the consultant nor that the latter report his opinion to the former. In fact, not only would the first physician not know that his patient was getting another opinion, but the subsequent opinion-givers would not necessarily know that they were consultants, and there was no thought of how to avoid solicitation of patients by these consultants. The qualifications for listing as consultants and the mechanisms of list development and list-holding were all sketchy and vague.

In New England, unlike the rest of the country, PSRO's were given the chance to do the job. Elsewhere the insurance carriers were chosen. In Connecticut, two PSRO's agreed. A third agreed with the major reservations that the program must be consonant with the AMA's position on second opinion, with the appropriate section of the AMA's code of ethics, and with Recommendation 27 of the National Commission on the Cost of Medical Care. The fourth PSRO in the state refused to participate and I wish to state categorically that this was its absolute right to do.

Where I and some of the Council parted ways with the remainder of the Council was over tactics. The Council at first voted not to cooperate with the program nor support it. This distressed me because organized medicine has always supported and urged the use of consultation for many good and ethical reasons, the most important of which was the welfare of the patient. Secondly, medicine has been most vigorous in attempting to protect the patient as to confidentiality and that battle is far from over. The Council's action, therefore, was at odds with our long-stated beliefs. I believed that these contradictions would prove great disadvantages in presenting our case to the public.

A special meeting of the Council with Mr. John B. Kennedy and Miss Annette Kesabian of the Health Care Finance Administration's Boston office was held after an inordinate delay. The following clarifications were elicited: First, if the personnel who answered the phones were capable, very few patients refused their names, or at least their Medicare identification, and so almost all could be followed. Secondly, and uniquely in New England, the encounter forms would have enough data to allow follow-up and each holder could use these blank slots, apparently several in number, for additional data that that holder wished. HEW would computerize all collected data. The Medical Care Evaluation function of PSRO could include studies of the effectiveness of the second opinion program. So, no special funding problems existed. I must say I was impressed with the sincerity and the honesty of the presentation as was the majority of the small number of Councillors in attendance, for this ad hoc subcommittee thereupon requested the Council to reconsider its position.

The Council did so in several hours of violent and impassioned debate and refused to alter its collective mind. As I summed up the losing side of non-opposition, if not con-cooperation, I was accidentally more effective than I knew, for I pointed out it was I who might be asked to speak for the Society. I could not see how I could explain opposition to a second opinion program, inadequate as it might be, nor the insistence of medicine on forcing patients to breach their own right to privacy, when we had so vigorously and long-championed both. It seems to me that the media could and would put the Society in a very unflattering light. After the vote, the Council considered various other matters, but the seed I had planted grew and Councillors on the winning side moved to reopen debate. The Council then passed a necessarily bland statement of non-opposition while vigorously pointing out the program's fault. At the least, the final position is defensible.

So, we are at this juncture, not opposing the concept of second opinion-seeking nor mandating loss of privacy, and the New England States have indeed achieved a second opinion program significantly different from the rest of the country. While not a pure research endeavor, it has enough capability to be able to evaluate its worth, its cost, and its effect on patients who use it. Its main fault at this point is its weak guidelines about communications between physicians and its unlimited duplication of tests. If I am correct, the program will prove itself more expensive and less worthwhile than it was propagandized to be and we will have the data to prove it.

Jerome K. Freedman, M.D.

Letters to the Editor

Connecticut State Medical Society members are invited to write to the Editor expressing their opinions or giving information on matters of mutual interest. The Editorial Committee reserves the right to select or reject communications. As with other material, all correspondence will be subject to the usual editing and possible abridgment. Letters to the Editor should be typed double-spaced (including references) with conventional margins. The length of the text is limited to 1½ manuscript pages. Address: J. Alfred Fabro, Editor, CONNECTICUT MEDICINE, 160 St. Ronan Street, New Haven, CT 06511.

Health Legislation News from Washington

Congress has postponed the effective date of controversial **Section 227 of the Social Security Act,** which would change the reimbursement mechanism for physicians' services in teaching hospitals for a one-year period. The section now is targeted for implementation on October 1, 1979. Sec. 227 provides that a physician's services in a teaching hospital would be reimbursed under Medicare on a cost basis (as opposed to a reasonable charge basis) unless the hospital complies with certain requirements or the services are provided to a private patient.

On September 12, the Department of Health, Education and Welfare began a nationwide program to encourage patients to seek a **second opinion** from a physician other than their own, particularly on elective surgery. The program provides reimbursement for 80 percent of the reasonable charges for covered services under Medicare for second-opinion consultations, while Medicaid coverage for second opinions will be matched with federal funds. With HEW's Health Care Financing Administration at the helm, the program will include a media campaign and a toll-free hotline to assist with the program's administration.

An amendment to HR 112, a tax bill which would **extend the tax-exempt status of loans to students** under PL 94-484, the Health Professions Educational Assistance Act, has been approved by the Senate. The amendment, which was introduced by Senators Russell Long (D-La.) and Floyd Haskell (D-Colo.), would extend tax exemption for both principal and interest on student loans as provided by PL 94-484 until January 1, 1983 and also would grant tax exemption for other guaranteed student loans which provide loan forgiveness in return for service in a health manpower shortage area . . . Also in regard to PL 94-484, regulations have been issued for federal program authorized by the law to assist **disadvantaged students to become involved in health careers.**

The House also passed HR 13655, the **HMO Amendments of 1978,** which would (1) extend federal support for HMOs through Fiscal Year 1981 at $63 million per year; (2) expand federal loan and grant programs for HMO development and expansion and (3) modify federal requirements regarding the services and organization of an HMO. The bill will be sent to the White House for approval as soon as differences with the Senate version, S 2534, are worked out.—*AAFP Reporter,* Nov. 1978.

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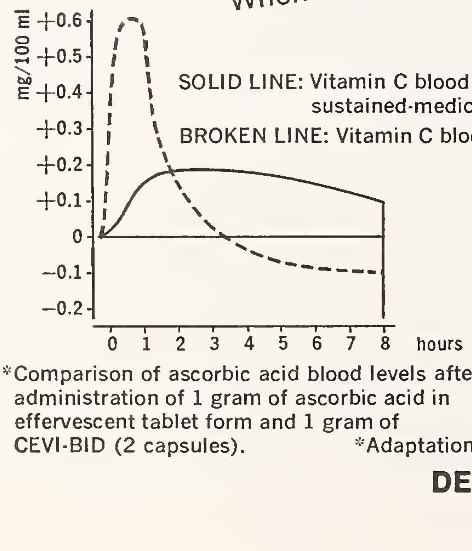

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[1] Riccitelli, M. L.: Vitamin C Therapy in Geriatric Practice, J. Amer. Geriatrics Soc. 20: 34, 1972.

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PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiries of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511 (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine* as space permits.

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

ALLERGY

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INTERNAL MEDICINE

Internist with sub-specialty (gastroenterology or pulmonary) wanted to join board certified internist in rapidly growing community in Western CT. Send CV to CSMS to be forwarded.

A two-man partnership is looking for a third to fill void left by recently deceased partner. Excellent diagnostic setup. General adult medicine. Cultural advantages of New Haven, relationship with Yale-New Haven Hospital. Contact Marvin Cousins, M.D., days 203-865-5111; evenings 203-393-1324.

PEDIATRICS

Pediatrician needed in Eastern Ct. as 3rd man in an incorporated group doing general pediatric and adolescent medicine. Training in Neonatology preferred. Norwich Pediatric Group, 92 New London Tpke., Norwich, CT 203-889-3835.

Rapidly growing two-man pediatric practice in Central CT seeking third man for July 1979. Send CV to CSMS/KMR to be forwarded.

Established three-man pediatric group seeks a replacement for associate leaving for fellowship in July 1979. Good salary, early partnership offered. Opportunity includes full teaching hospital affiliation. Contact Peter J. McLoughlin, M.D., 1984 Park Ave., Bridgeport, CT 06604.

Two Pediatricians aged 33 with rapidly expanding practice in Southeastern CT seek young, Bd. elig. and/or cert. third associate. Contact: David M. Rinzler, M.D., or Dennis S. Long, M.D., Rt. 12, Torrey Park, Gales Ferry, CT 06335.

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Residents in psychiatry: First, Second, Third, and PGY1 year residency positions available. AMA approved program affiliated with Yale. Intensive clinical experience with outpatients and hospitalized individuals. Seminars and clinical case conferences. Training in special psychiatric problems of children, adolescents, the aged and substance abusers available; individualized track assignments for third year residents. Liberal stipends and full fringe benefits, housing at minimal cost. Connecticut Valley Hospital, Box 351, Middletown, CT 06457.

SURGERY

General Surgeon recently deceased. Large solo active practice. Contact Mrs. J. Donald Corridon, Pequot Dr., East Norwalk, CT 06855. 203-866-1961.

PHYSICIANS WISHING TO LOCATE IN CONNECTICUT

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Available now. Age 38. Conn. license. AB-elig. MD from Iran. Int. at Bridgeport Hosp. Res. at NY Hosp.-Cornell. Fellowship at Flower & Fifth Ave. Hosp., NY, also VA Hosp., Manhattan. Wishes solo or grp. practice in large community. Parvin Javadi, M.D., 57 Montague St., Apt. 9G, Brooklyn, NY 11201.

Available anytime. Age 34. AB-elig. Presently in practice. MD from India. Int. at St. Joseph's, RI. Res. at Cambridge Hosp., Mass. Fellowship at Boston City Hosp. Special interest in teaching, research and clinical practice. Geeta R. Trivedi, M.D., P.O. Box 508, Norwich, CT 06360

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Pulmonary: July '79. Age 29. Conn. license. Nat'l. bds., cert. MD from NY Med. Coll. Int. and res. at Stamford Hosp., CT. Fellowship at Univ. of Cincinnati. Grp. or assoc. practice desired. Arthur Bentsen, M.D., 11643 Timber Ridge Lane, Cincinnati, O 45241.

July '79. Age 27. Nat'l. bds., elig.-6/79. MD from Boston Univ. Int. at Wayne State. Res. at Norwalk Hosp. Will consider all types of practice in any community. Edward R. Berman, 40 Prospect Ave., Bldg. 1, Apt. 2-M, Norwalk, CT 06850.

July '79. Age 27. Conn. license. Nat'l. bds., elig.-7/79. MD from Albany Med. Coll. Int. and res. at St. Raphael's Hosp. Would like accessibility to CME. Wishes grp. or assoc. practice, but will consider solo practice. Contact CSMS-IM/AMD.

Hematology/Oncology/Infectious Diseases: July '79. Age 31. Nat'l. bds. Cert.-IM/Hem.-Onc. Elig.-Inf. Dis. MD from Tufts. Int., res. and fellowship at NY Hosp. Also fellowship at Memorial Hosp. Will consider all types of practice in large or med. community. Mark A. Failk, M.D., 435 East 70th St., NY 10021.

Gastroenterology: July '79. Age 31. AM-elig. MD from Guadalajara. Int., res. and fellowship at General Hosp., Baltimore. Grp. or assoc. practice in CT. Jeffrey S. Garbis, M.D., 1425 John St., Baltimore, MD 21217.

Hematology/Oncology: July '79. AB-cert. MD from India. Int. at Flushing Hosp. Res. and fellowship at L.I.J. aff. Q.G.H.-New Hyde Park. Single specialty grp. perferred, but will consider multi-specialty grp. Contact CSMS-IM/H/O/JKK.

Available now. Age 46. AB-elig. MD from Georgetown. Int. and res. at St. Vincent's Hosp., Worcester, Mass. Also res. at Seton Hall and VA, NJ. Wishes grp. practice in med. to small community. Presently in practice. CSMS/IM/LRM.

Hematology: July '79. Age 30. Nat'l. bds., cert. MD from George Washington Univ. and also int. and res. at affiliated hospitals. Fellowship at Tufts Med. Ctr. Grp. assoc. or multi-specialty/hospital based position in CT. Contact CSMS/IM/KFM.

Cardiology: July '79. Age 32. FLEX. AB-cert. MD from India. Int. at Brooklyn Cumberland Med. Ctr., NY. Res. at Memorial Hosp., Worcester, Mass. Fellowship at Maine Med. Ctr. Also 5 years experience in India. Grp. or assoc. practice in large or med. community. Dhirendra Mohan, M.D., 757 Main St., Apt. 30, S. Portland, ME 04106.

Oncology: July '79. Age 29. Nat'l. bds., elig. MD from SUNY-Downstate. Int. at St. Vincent's Hospital, NY. Res. at Brooklyn Jewish Hosp. Fellowship at Baltimore Cancer Research Ctr., National Cancer Institute. Grp. or assoc. practice in CT desired. Stanley Ostrow, M.D., 9 Wytchwood Ct., Baltimore, MD 21209.

Cardiology: Jan. '79. Age 34. FLEX. AB-elig. MD from Univ. of Bologna. Int., res. and fellowship all at Long Island Coll. Hosp. Prefers availability for invasive and non-invasive procedures. Solo or assoc. practice in med. or small community. Dominick J. Passalacqua, M.D., 3292 East 5th St., Brooklyn, NY 11223.

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SURGERY

Jan. '79. Age 36. FLEX. AB-elig. MD from Univ. of Lausanne, Switzerland. Int. at Metropolitan Hosp., NY. Res. at State Univ. of NY. Presently in practice. Wishes solo, grp. or assoc. practice. Vito Marrero, M.D., 159 Crescent Pl., Yonkers, NY 10704.

July '79. Age 30. Nat'l. bds., elig. MD from Univ. of VT. Int. and res. at Barnes Hosp., fellowship at Washington Univ. Grp. assoc. or institutional practice in large community. Leon Stechenberg, M.D., 8347 Cornell Ave., St. Louis, MO 63132.

Available now. Age 54. Nat'l. bds., elig. MD from Tufts. Int. and res. at Maine Med. Ctr. Will consider all types of practice except solo in large or med. community. James E. Surgenor, M.D., Box 1929, Hartford, CT 06106.

June '79. Age 31. FLEX. ECFMG. MD from Guadalajara. Int. and res. at Univ. of Maryland at York Hosp., PA. Solo, grp. or assoc. practice desired. Ronald M. Yarrington, M.D., 108 Oak Street, York, PA 17402.

UROLOGY

Jan. '79. Age 29. Nat'l. bds., AB-elig. MD from Cornell. Int., res. and fellowship at Mass. Gen. Hosp. Grp. or assoc. practice in large or med. community. Trained in urologic oncology and would also be interested in pediatrics and/or transplantation if available. Peter T. Nieh, M.D., 103 Locust St., Burlington, Mass. 01803.

Available anytime. Age 35. Conn. License. Nat'l. bds., AB/Surg.-cert., Urol.-elig. MD from Yale. Int. at Hahnemann Hosp., PA. Res's. at St. Elizabeth's Hosp., MA and Walter Reed Army Hosp., DC. Grp. or assoc. practice in large or med. community in Ct. Robert A. Vollero, M.D., 13800 Blair Stone Lane, Silver Spring, MD 20906.

July '79. Age 31. FLEX. AB-elig. MD from Univ. of Brussells. Int. at Indiana Univ. Res. at William Beaumont Hosp., MI. Will consider all types of practice in large or med. community. Mark L. Hammel, M.D., 3218 Belle Ct., Royal Oak, MI 68072.

July '79. Age 29. Nat'l. bds., elig. MD from Yale. Int. and res. at Univ. of KY. Experienced in surgical care of patients with end stage renal disease including vascular access for hemodialysis, transplantation and peritoneal dialysis. Solo, grp. or assoc. practice in large or med. community. Contact CSMS/UROL.-EOJ.

July '79. Age 30. Nat'l. bds., elig. MD from Columbia P&S. Int., res. and fellowship all at Georgetown Univ. Grp. or assoc. practice in med. community along the coast. William M. Sherman, M.D., 206 Pennsylvania Ave., Falls Church, VA 22046.

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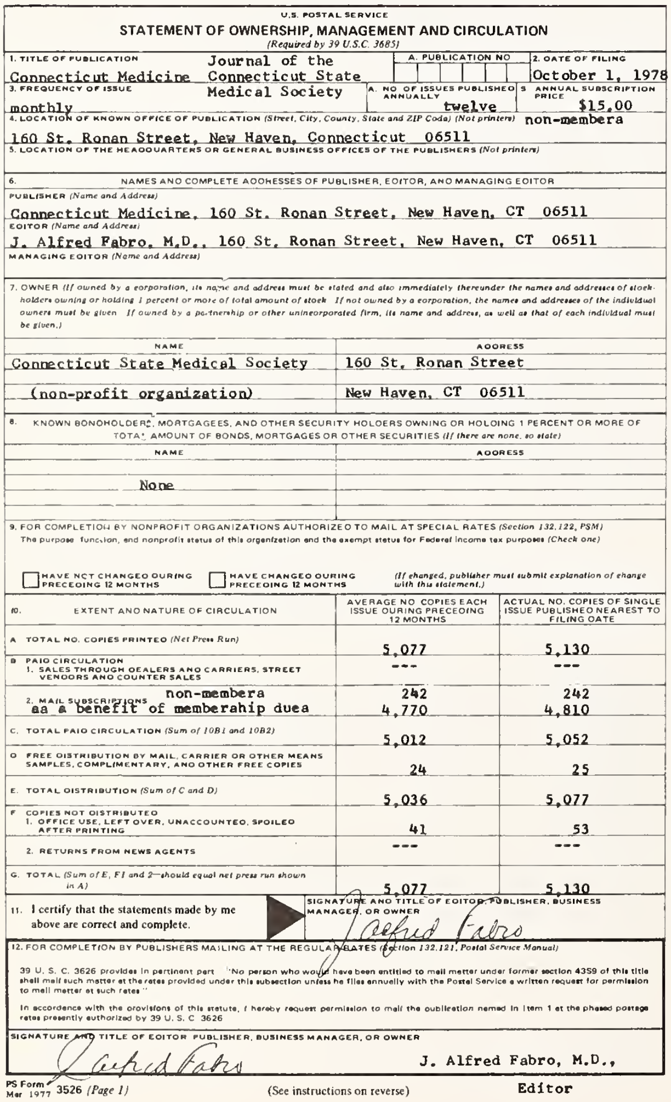

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NOTICE TO CONTRIBUTORS

Members of The Connecticut State Medical Society reading papers before other organizations are requested to submit their papers to the JOURNAL for consideration by the Board of Editors for publication. Authors preparing manuscripts for submission to *Connecticut Medicine* should consult **INFORMATION FOR AUTHORS**. This material may be obtained from the *Journal* office. Adherence to the instructions will prevent delays both in acceptance and in publication.

Please send them to: J. Alfred Fabro, M.D., Editor
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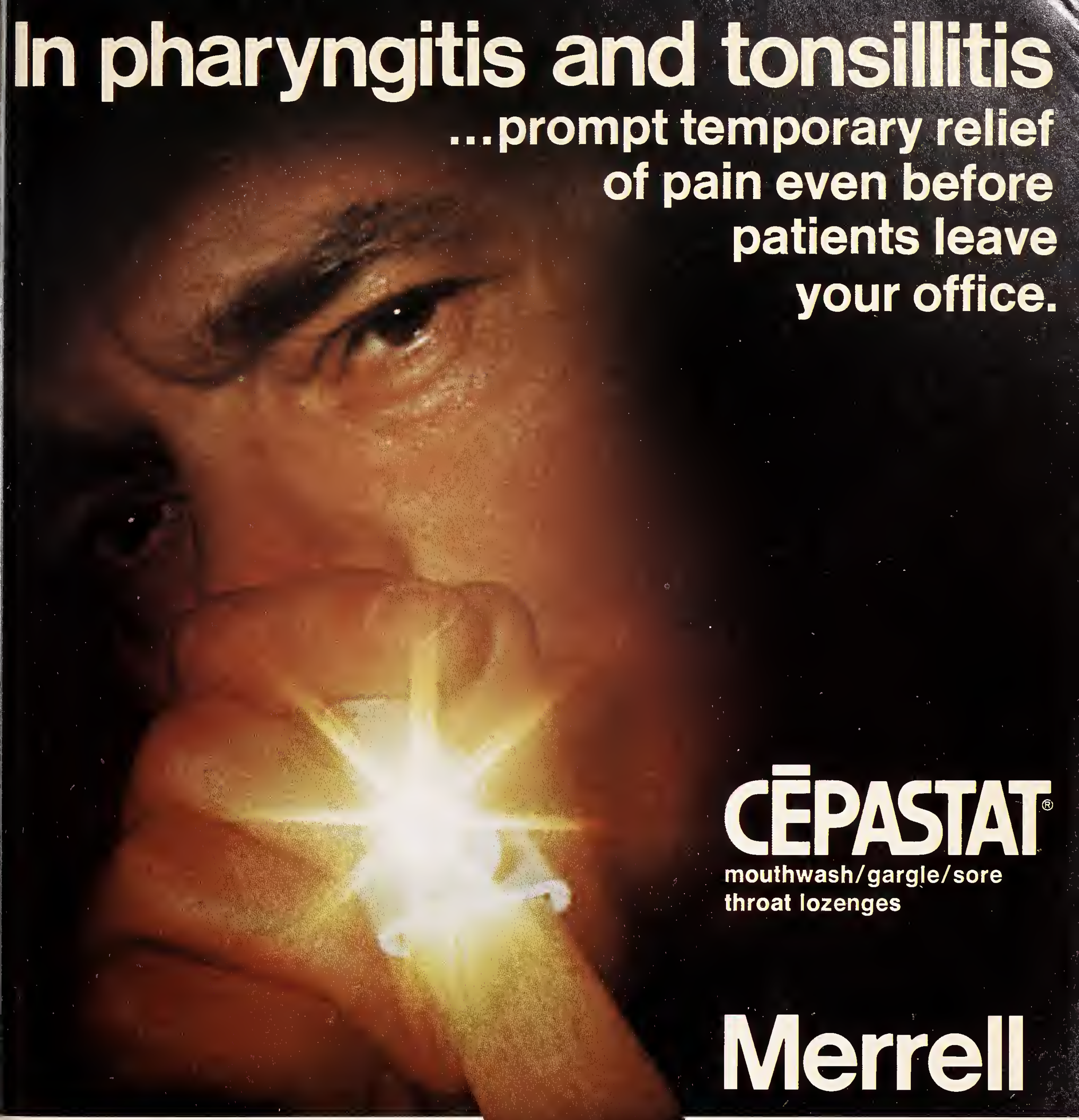

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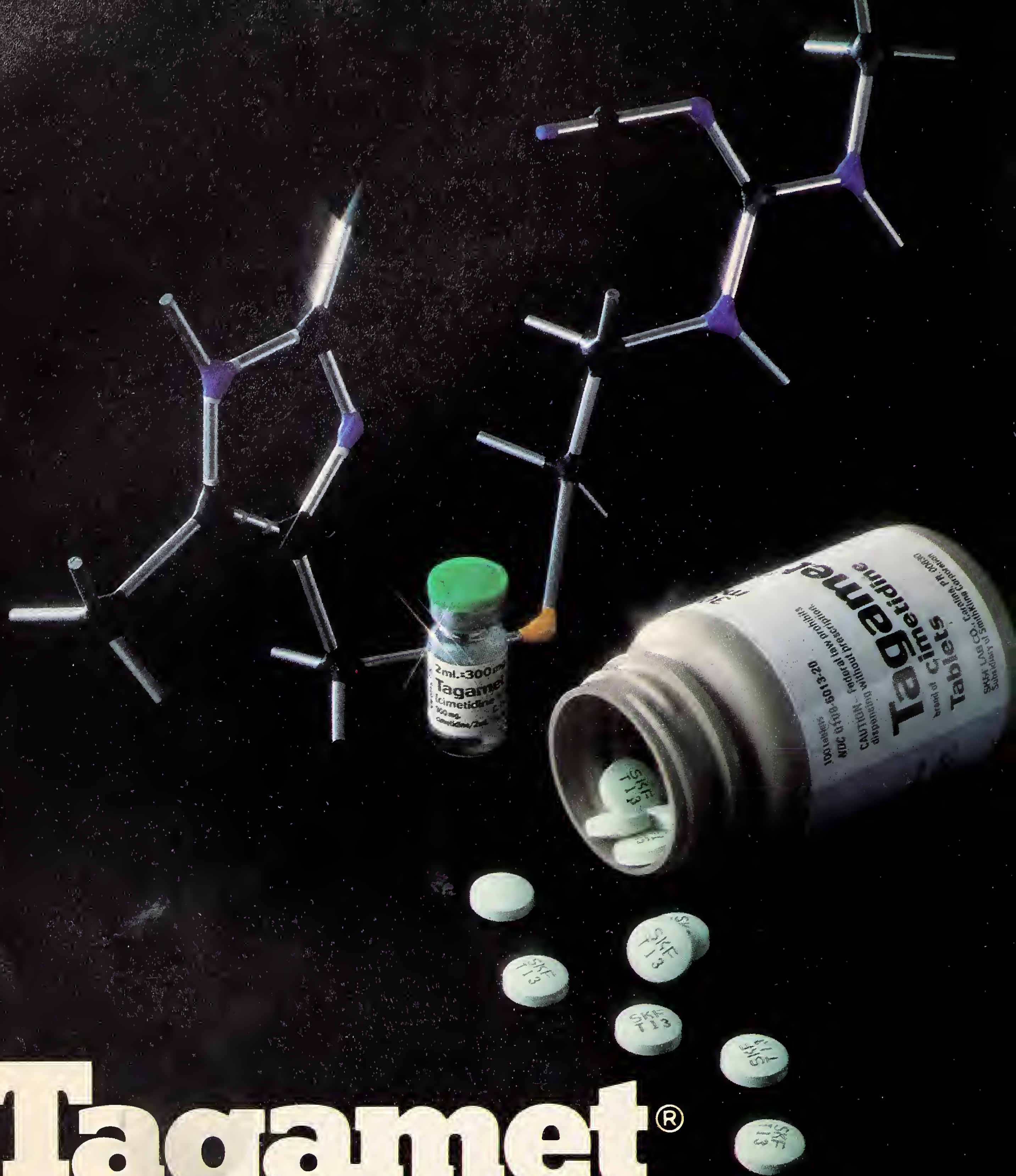

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The 1978 Roster

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CONNECTICUT
STATE
MEDICAL
SOCIETY

and the

Auxiliary

FOUNDED IN 1792

Reference Material for Practicing Physicians

- CSMS Membership
- Life Membership Requirements
- The House of Delegates
- The Council
- Medical Ethics
- Renewal of Medical License
- Change of Address
- Directory of the State Dept. of Health
- Available Laboratory Services
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- Medical Assistance Program
- Department of Mental Health
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Supplement to
CONNECTICUT MEDICINE
THE JOURNAL OF THE
CONNECTICUT STATE MEDICAL SOCIETY
Volume 42, Number 8

August 1978

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CSMS MEMBERSHIP

An exact statement of membership requirements appears in the Bylaws of the Connecticut State Medical Society.

Active Members:

Active membership shall be limited to those members of component associations who are certified to the Executive Director of The Society as entitled to exercise all rights of membership in their component associations including the rights to vote and hold office. A physician eligible for active membership in The Society becomes an active member of The Society upon receipt by The Society of annual dues, which are established annually by the House of Delegates.

Associate Members:

Individuals interested in the science of medicine and public health, but not licensed to practice medicine in the State of Connecticut may apply for associate membership in The Society. Once elected, an associate member may attend meetings, serve on committees, present papers before The Society, but may not vote or hold elective office.

Honorary Members:

Eminent physicians may be made honorary members by a majority vote of the House of Delegates. Honorary members may not vote or hold office and are not expected to pay dues.

Life Members:

Any member of The Society who has been an active member of The Society or of the American Medical Association for thirty-five consecutive years or who has reached his sixty-fifth birthday anniversary and has been an active member of The Society or of the American Medical Association for fifteen or more years, or any active member of The Society who becomes totally and permanently disabled shall be eligible for life membership. A physician eligible for life membership may apply for such membership to the Executive Director of The Society and shall become a life member on approval by the Council. Life members shall not be subject to dues or assessments but shall be accorded all the rights and privileges of active membership in The Society including the rights to vote and hold office.

Exemption from payment of dues for Life Members shall become effective on January 1 of the year following the thirty-fifth year of membership or of the anniversary year of their sixty-fifth birthday, whichever is applicable.

Student Members:

Any bona fide medical student in the State of Connecticut or any Connecticut resident attending an out of state medical school may become a student member of The Society. Physicians, not licensed to practice medicine in

Connecticut, who are serving as interns and residents in Connecticut hospitals may obtain student membership. Student members file special applications for membership to the Council. Student members may not vote or hold office and are not required to pay dues.

Members who become inactive or are expelled or suspended from a county association will be placed in the same category with The Society.

THE HOUSE OF DELEGATES

Powers and Duties:

The House of Delegates is the ultimate legislative and policy-making body of the Society and assumes primary responsibility for the management of the affairs of the Society. As such, it elects the Society's officers, boards and committees, formulates the bylaws, approves budgets and assesses membership dues.

Composition:

The membership of the House consists of the delegates elected by the component county medical associations (one delegate for each thirty-five members or fraction thereof), the members of the Council, and the past presidents of the Society, ex-officio and without vote. All members of the House must have been members of the Society for at least two years immediately prior to being seated.

Meetings:

The House of Delegates holds two regular meetings each year, one in the fall and one in the spring. Special meetings of the House may be called by the Speaker on written requests of twenty-five or more delegates or by a majority of the voting members of the Council. At special meetings, no business other than that stipulated in the call for the meeting may be considered. Meetings of the House of Delegates are open to all members who wish to attend as observers.

Introduction of Resolutions:

Resolutions must be received in writing at the office of the Executive Director not later than thirty days before the date scheduled for the convening of the House in order to be considered as regular business. Resolutions presented later than the deadline may be considered if accepted by a majority vote of the House.

Referendum:

A referendum on any issue may be conducted among the members of the Society, if approved by a two-thirds vote of the delegates. The majority vote of those members responding to the referendum shall determine the question and be binding on the House of Delegates.

THE COUNCIL

Powers and Duties:

The Council is granted by the House of Delegates all powers necessary to act as the executive and administrative body of the Society while the House in not in session.

Composition:

The Council consists of the general officers of the Society, any member who is serving as a general officer of the American Medical Association, and the Councilors and Associate Councilors elected by the component county medical associations.

Meetings:

Under normal circumstances the Council meets at monthly intervals throughout the year. On occasion, the Council may hold additional meetings for the purpose of considering, or completing action on, matters of special importance. Meetings other than those scheduled by consent of the Council may be called by the Chairman or upon petition of three members of the Council.

Procedure:

As with the House of Delegates, any member of the Society or any group of members may submit matters to the Council for consideration. Such communications are to be addressed in writing to the Chairman of the Council care of the Society's headquarters, 160 St. Ronan Street, New Haven, and will be placed on the agenda of the earliest meeting possible following receipt. In most instances, the decision of the Council is equivalent to a decision by the House of Delegates. However, in certain instances, the Council may elect to transmit the matter, with recommendations, to the House of Delegates for final disposition.

MEDICAL ETHICS

The Bylaws of the Connecticut State Medical Society state that "the Principles of Medical Ethics of American Medical Association shall govern the conduct of members in their relations to each other and to the public".

PREAMBLE: These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

SECTION 1: The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

SECTION 2: Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

SECTION 3: A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

SECTION 4: The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose without hesitation, illegal or unethical conduct of fellow members of the profession.

SECTION 5: A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

SECTION 6: A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

SECTION 7: In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

SECTION 8: A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

SECTION 9: A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

SECTION 10: The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

ANNUAL RENEWAL OF MEDICAL LICENSES

Section 19-45(b) of the Connecticut statutes requires renewal of medical licenses annually during the month of January. An IBM application is sent at the end of December. The registration fee is $160. There is no prorating.

Public Act No. 77-647 provides for a registration fee of $20 for Connecticut-licensed physicians who reside and practice outside of Connecticut. This act is effective October 1, 1977.

No fee is required of practitioners in military service or retired, but there is no exemption for anyone from the registration requirement. Everyone must register. The penalty for late registration is $50.

Registration is handled through the State Department of Health, 79 Elm Street, Hartford, Connecticut 06115.

CHANGE OF ADDRESS

Practitioners are required to report to the State Department of Health within thirty days any change of address for office and/or residence. (Section 19-46)

REGISTRATION OF X-RAY DEVICES USED FOR DIAGNOSIS AND THERAPY

Connecticut statutes require that the owner of any device or devices emitting x-rays which are used for diagnostic and therapeutic purposes must be registered with the State Department of Environmental Protection, State Office Building, Hartford, Connecticut 06115. Owner, according to statute, means any person or organization having by the law the administrative control of the x-ray device or devices.

Registrations at the present time must be renewed biennially during the month of April in the even-numbered years. The fee at each location is fifteen dollars for one x-ray device, five dollars for the second device, and one dollar for each additional x-ray device registered by one owner.

DIRECTORY OF KEY NAMES AND ADDRESSES FOR THE STATE DEPARTMENT OF HEALTH

Connecticut State Department of Health
79 Elm Street
Hartford, Connecticut 06115

Douglas S. Lloyd, M.D., M.P.H., Commissioner
Tel: 566-2279

Dennis F. Kerrigan, Acting Deputy Commissioner
Tel: 566-2197

Regional Offices and Directors:

(Vacancy)
Northeastern Regional Office
P.O. Box 58
Mansfield Depot, CT 06251
Tel: 429-9395

James E. Stark, M.D.
Southeastern Regional Office
401 W. Thames St.
Norwich, CT 06360
Tel: 889-8341

Paul P. Liscio, D.D.S.
Southwestern Regional Office
44 Old Ridgefield Rd.
Wilton, CT 06897
Tel: 762-8301

Michael Weber, D.D.S.
South Central Regional Office
Laurel Heights Hospital
Shelton, CT 06487
Tel: 735-9513

AVAILABLE LABORATORY SERVICES

Laboratory tests are provided by the Connecticut State Depaartment of Health for the diagnosis and control of the following preventable diseases:

Anthrax—Cultures for anthrax bacilli.

Brucellosis (undulant fever)—Agglutination tests; blood and tissue cultures.

Diphtheria—Cultures; virulence tests.

Enteric Bacillary Infections—Stool examinations for Salmonellae, Shigellae and enteropathogenic Escherichia coli.

Food Infections and Food Poisoning—Tests for causative organism: Salmonellae, staphylococci, Clostridium perfringens, botulism, etc.

Fungus Infections (Mycoses)—Microscopic, cultural, and serologic examinations for pathogenic molds and yeasts.

Genetic Diseases—Blood examinations for Tay Sachs disease, Sickle Cell Anemia and Thalassemia.

Gonorrhea—Smears and cultures.

Inborn Errors of Metabolism—Filter paper blood specimens for phenylketonuria, galactosemia and hypothroidism screening; filter paper urine specimen for additional screening for phenylketonuria. Blood specimen for follow-up test for phenylketonuria. Blood and urine specimens for complete amino-acid screening.

Lead Poisoning—Blood specimen for blood lead determination. Capillary blood filter paper specimen for blood lead screening.

Urine dipstick specimen for testing for ALA.

Legionaire's Disease—Serologic tests and cultures.

Leptospirosis—Serologic tests; cultures by arrangement.

Malaria—Blood smears and serological tests.

Mononucleosis—Serologic tests.

Parasitic Diseases—Stool examinations for amebae, other protozoa and helminths; vaginal smears for trichomonads; serologic tests; anal swabbings for pinworms.

Rabies—Fluorescent antibody and mouse inoculation tests.

Rickettsial Infections—Serologic tests on paired blood serums.

Staphylococcal Phage Typing For epidemiological investigations.

Streptococcal Infections—Throat cultures; serologic grouping; streptococcal antibody tests.

Syphilis—VDRL flocculation tests; FTAABS tests; darkfield examination.

Toxoplasmosis—Serological tests.

Tuberculosis—Microscopic, cultural, biochemical and drug susceptibility tests.

Tularemia—Agglutination tests; cultures by arrangement.

Typhoid and Other Salmonella Infections—Agglutination tests; cultural tests on blood, feces and urine.

Vincent's Infections—Clinical smears.

Viral Infections—Serological tests on paired blood specimens and cultural tests for respiratory neurologic, enteric and exanthemous groups of viruses. Services include: Hepatitis B— antigen and antibody tests; Genital Herpes—cultures: Premarital test for Rubella immunity.

SEND ALL SPECIMENS TO LABORATORY DIVISION, STATE DEPARTMENT OF HEALTH,
P.O. Box 1689, Hartford, Connecticut 06101

Containers for forwarding specimens can be obtained from local directors of health or directly from Laboratory Division, 10 Clinton St., Hartford, Connecticut 06101. Tel: 566-2536, 566-3971.
Unlisted cultures and serological tests may be available. Direct inquires to 566-5723 (Bacteriology) or 566-4776 (Virology).

MEDICAL ASSISTANCE PROGRAM

The Connecticut Department of Social Services Provides for Payment of Medical Care Under the Title XIX Program for:

1. All recipients receiving money payments under the AFDC program.
2. Children committed to the Department of Children and Youth Services.
3. Medically needy children under 18 of parents receiving General Assistance.
4. Medically needy individuals under 21 years of age in the community.
5. Categorically needy and medically needy groups of aged, blind and disabled.

The State Funded Program, namely, Connecticut Assistance and Medical Aid Program for the Disabled provides medical care for disabled individuals, who do not meet the Title XVI or Title II definition of disability, but who meet the Department of Social Services definition of disability.

These programs are administered through the District and Sub-Offices of the Department of Social Services. Physicians are advised to contact the nearest office:

Hartford	100 Spring Street	566-5900
New Haven	294 Bassett Street	787-6181
Bridgeport	434 State Street	384-1761
Norwich	279 Main Street	889-2351
Torrington	352 Main Street	482-5531
Waterbury	79 Linden Street	578-1211
Middletown	117 Main Street Ext.	347-4411
Stamford	1642 Bedford Street	357-8144
Manchester	Suite 205, 364 West Middle Tpke.	647-1441
Danbury	405 Main Street	744-2494
New Britain	233 Main Street	224-2601
Meriden	139 Charles Street	238-6200
Bristol	308 Main Street	583-1671

MEDICARE PART B

Medicare payments to physicians for specific services and procedures are based on each physician's "fee profile" developed from his past charges to Medicare patients, up to a maximum amount based on the 75th percentile of such fees for all the physicians in his charge area of the state.

Each physician's fee profile is updated annually in July. A physician can receive his own profile by making a written request to:

Professional Relations Department
Medicare Claims Department
Connecticut General Insurance Company
200 Pratt Street
Meriden, Connecticut 06450

Medicare benefits amount to 80% of the physician's actual fee, or 80% of the physician's fee profile for the procedure, or 80% of the "prevailing charge" (75th percentile) for his charge area, whichever is lowest. This benefit applies only after a $60 annual deductible has been met. This $60 and the remaining 20% "coinsurance" are the responsibility of the patient. Many Medicare patients have elected to purchase supplementary insurance such as "CMS 65" to cover the 20%. Relatively few are covered for the annual $60 deductible.

Medicare "Piggybacking"

Under the Medicare law, doctors have the option in each case to "accept assignment" for charges to Medicare patients. By this, the physician agrees to accept as payment in full the Medicare benefit plus the 20% coinsurance and $60 deductible, if applicable. The advantage of accepting assignment is now greater, because the "piggybacking" of supplementary insurance claims on Medicare claim forms is fully in effect. By filing only one cumulative claim form, the physician who accepts assignment will receive direct payment for both the Medicare B benefit and the supplementary insurance benefit directly from the insurance carriers. Except for those few patients whose supplementary insurance policy does not cover a $60 deductible not yet met, the elderly would have no further liability. For claims on which assignment is not accepted, all benefits are paid directly to the patient.

Acceptance of the Medicare assignment is a service that a physician may offer voluntarily to his elderly patients of modest means, and is well in keeping with the time-honored principle of medical ethics that the physician's fee "be commensurate with the services rendered and the patient's ability to pay." Since such patients may often be reluctant to request special consideration out of pride or fear of rebuff, the physician's discreet sensitivity to these situations is of great importance.

DEPARTMENT OF MENTAL HEALTH

Physicians may obtain detailed descriptions of the various programs sponsored for the care of the mentally ill by contacting the State Department of Mental Health, 90 Washington Street, Hartford, Connecticut. Telephone 566-5270.

Department of Mental Health Facilities

Blue Hills Hospital
51 Coventry Street
Hartford, Conn. 06112
Phone: 566-4404

Cedarcrest Regional
Hospital
Newington, Conn. 06111
Phone: 666-4163

Conn. Mental Health Center
34 Park Street
New Haven, Conn. 06508
Phone: 772-3300

Connecticut Valley Hospital
Middletown, Conn. 06457
Phone: 347-5651

Franklin S. DuBois Day Treatment Center
49 Glenbrook Rd.
Stamford, Conn. 06902
Phone: 327-0620

Fairfield Hills Hospital
Newtown, Conn. 06470
Phone: 426-2531

Greater Bridgeport Community Mental
Health Center
1635 Central Ave.
Bridgeport, Conn. 06610
Phone: 384-1711

Norwich Hospital
Norwich, Conn. 06360
Phone: 889-7361

Whiting Forensic Institute
P. O. Box 70
Middletown, Conn. 06457
Phone: 347-8059

Inquiries concerning drug and alcohol dependency may also be made at the following locations:

Regional Outpatient Clinic
412 Orange St.
New Haven, Conn. 06511
Phone: 787-5931

Regional Outpatient Clinic
60 Guernsey Street
Stamford, Conn. 06901
Phone: 359-0710

Regional Outpatient Clinic
2 Holcomb St.
Hartford, Conn. 06112
Phone: 566-7330

Drug information is available at the :

Connecticut Mental Health Center
New Haven, Phone: 772-3300

Capitol Region Drug Information Center
179 Allyn Street, Suite 403, Hartford, Conn. 06102 Tel. 547-1300

Admission into state sponsored treatment facilities is defined in a number of Connecticut statutes. Specific information on the various statutes is available through the Public Information Officer of the State Department of Mental Health. (566-5270)

The following are some of the modes of admission to state facilities:

Informal—request made by patient; free to leave at any time. (Section 17-187(b).)

Voluntary—request made in writing by patient; may not be confined more than ten days after written request to leave. (Section 17-187(a).)

Informal or Voluntary for drug dependent person—inpatient treatment available; patient shall not be discharged for at least 90 days after admission. (Section 19-494.)

Physician's Emergency Certificate—issued by a physician; commitment for no more than 45 days. (Section 17-183.)

Court Commitments—certain courts may commit a person on grounds of insanity, mental retardation, alcoholism or drug dependency to certain facilities of the Department of Mental Health and/or to the Commissioner for treatment. (Section 54-40 and Section 17-185.)

REPORTABLE DISEASES
(Revised and Effective June, 1978)

Section 19-13-A3 of the regulations of Connecticut State Agencies as revised and effective June, 1978, requires that a physician report to the local director of health a person under his care or observation who is affected or apparently affected with a reportable disease. Such report shall include the patient's full name, age, address, sex, and occupation, as well as the name and date of onset of the disease. If the patient is hospitalized, the name of hospital shall be included, and if a disease preventable by immunization is present., the immunization status shall be included if available. Such report shall be made as follows:

Category I: Diseases of high priority because of critical public health importance (IA) or frequency of occurrence (IB). Reports for Category IA diseases shall be made immediately by telephone, on the day of recognition of the disease, with duplicate reports in writing to the state and local health departments. The local health department shall likewise immediately telephone the state health department to inform them of the situation. For Category IB, reports must be made within twenty-four hours of diagnosis as specified above and should be by telephone. For cases diagnosed weekends, evenings or holidays, report should be made on the following business day.

Category II: Diseases of significant public health importance, for which the identifying data specified above are also required. Such report shall be made in writing, as specified above, within twenty-four hours of diagnosis, but should also be made by telephone, when practicable.

Category III: Diseases for which the above identifying data is not useful may be reported by number of cases seen by the reporting entity per week. For this purpose, weeks shall be considered to begin on Saturday and end on Friday.

Special forms for reporting this information are available from the State Department of Health.

DISEASE	PRIORITY CATEGORY
Amebiasis	II
Anthrax	IA
Botulism	IA
Brucellosis	II
Chancroid (See Venereal Diseases)	
Chickenpox (Varicella)	III
Adult Cases	II
Cholera	IA
Diarrhea of Newborn (See Institutional Outbreaks)	
Diphtheria (all forms)	IA
Dysentery Amebic (See Amebiasis)	
Dysentery Bacillary (See Shigellosis)	
Encephalitis (all types)	II
Food Poisoning Outbreaks	IA
a. Staphylococcal	
b. Other	
German Measles (See Rubella)	
Gonorrhea (See Venereal Diseases)	
Granuloma Inguinale (See Venereal Diseases)	
Hemorrhagic Jaundice (See Leptospirosis)	
Hepatitis A Viral, HBsAg Negative	IB
Hepatitis B Viral, HBsAg Positive	IB
Hepatitis Viral, unspecified, HBsAg undetermined	IB
Histoplasmosis	II
Influenza	III
Institutional Outbreaks	II
Lead Poisoning Level more than 40 MCG/ML	II
Leprosy (Hansen's Disease)	II
Leptospirosis	II
Lymphogranuloma Venereum (See Venereal Diseases)	
Malaria	II

DISEASE	PRIORITY CATEGORY
Measles (Rubeola)	IB
Meningitis, Aseptic	II
Meningitis, Meningococcal Disease	II
Meningitis, Hemophilus Influenzae	II
Meningitis, Other Types	II
Mononucleosis Infectious	III
Mumps (Infectious Parotitis)	II
Ophthalmia Neonatorum (See Venereal Diseases)	
Pertussis (Whooping Cough)	II
Plague	IA
Poliomyelitis	IA
Psittacosis (Ornithosis)	II
Q Fever (See Rickettsial Infections)	
Rabies (in humans)	IA
Reyes Syndrome	II
Rheumatic Fever	II
Rickettsial Infections (Q Fever, Rickettsialpox, Typhus)	II
Rocky Mountain Spotted Fever	II
Rubella (German Measles)	IB
Salmonella Infections	II
Scarlet Fever (See Streptococcal Infections)	
Shigellosis	II
Smallpox	IA
Streptococcal Infection (Group A — Beta Hemolytic)	III
Syphilis (See Venereal Diseases)	
Tetanus	II
Trichinosis	II
Tuberculosis	IB
Tularemia	II
Typhoid Fever	II
Typhus Fever (See Rickettsial Diseases)	
Venereal Diseases	II
a. Gonorrhea	
b. Syphilis	
c. Other	
Whooping cough (See Pertussis)	
Yellow Fever	IA

Diseases Reportable Directly To State Department of Health

Epilepsy

Diseases Reportable Directly To State Department of Labor

Occupational Diseases

CONDENSED REGULATIONS FOR PRESCRIBERS CONCERNING CONTROLLED SUBSTANCES

The following information on controlled substances, as they relate to practicing physicians, has been condensed from various state and federal sources and has been prepared by the Joint Medical-Pharmaceutical Committee of the Connecticut State Medical Society and the Connecticut Pharmaceutical Association and by the Drug Control Division of the Connecticut Department of Consumer Protection.

Information Sources

Literature on controlled substances, dangerous drugs, drug legislation and drug abuse may be obtained by contacting:

Drug Enforcement Agency
450 Main Street
Room 628E
Hartford, Conn. 06103 (244-3230)

or

Drug Control Division
Department of Consumer Protection
State Office Building, Room G37, 165 Capitol Ave.
Hartford, Conn. 06115 (566-4490)

Federal Registration and Renewal Requirements

Practicing physicians involved with either the purchasing, the administering, the dispensing or the prescribing of controlled substances must file a controlled substances registration form (B.N.D. 224) with the Department of Justice, Drug Enforcement Agency, P. O. 28083, Central Station, Washington, D.C. 20005. Each physician who files such a form will be issued a seven digit D.E.A. number. Connecticut physicians should check all six boxes on the form under "2. Drug Schedules".

A renewal application must be filed each year. A $5.00 annual fee must accompany each application. Failure to register annually will make a physician ineligible to purchase, to administer or to prescribe controlled drugs. The expiration date will not be uniform for all physicians in the state. The Federal renewal forms must be filed 45 to 60 days before the expiration date which is printed on the D.E.A. forms which will be mailed to each physician. A complete and accurate inventory of all controlled drugs must be taken upon original registration.

Thereafter, a biennial inventory should be taken on May 1 of each second year and filed with other drug records for three years.

State Registration Requirements

Starting on January 1, 1978 and thereafter, physicians who wish to prescribe, administer, distribute, or dispense any controlled substance must also obtain a certificate of registration issued by the Commissioner of Consumer Protection before they engage in the above mentioned activities. This certificate is required in order to obtain a federal D.E.A. registration.

Using the following schedule physicians will be required to register in the month which corresponds to their last name. The registration fee will be $10.

Month	First Letter of Name
January	M
February	S
March	L
April	Q, R
May	U, V, W, X, Y, Z
June	A, D
July	B
August	C, E
September	F, G
October	H, N
November	I, T
December	J, K, O, P

Examples: Dr. Jones will register in the month of December 1978, Dr. Smith in the month of February 1978, Dr. Brown in the month of July 1978.

An explanatory letter and the registration application will be mailed to each physician in the month prior to his required registration month. Failure to register with the state will void the physician's federal D.E.A. permit.

Prescribing, Purchasing and Dispensing Requirements

The D.E.A. number must appear on each prescription blank in such a way that it can not be altered. Generally speaking, controlled drugs are all narcotics, amphetamines, barbiturates and other potent drugs having a potential for abuse as defined under state and federal laws. Stock packages of controlled drugs bear the capital letter "C" with a Roman numeral II — III — IV — or V on the label to identify their controlled drug schedule. Drugs with higher abuse potential are placed in the II category. Some examples of commonly prescribed drugs in each of these categories are given in Appendix I.

If a practitioner engages in purchasing and dispensing any controlled drugs he is required to keep a record of all controlled drugs received from *all* sources (including samples) and dispensed by him. The record should indicate the date of receipt, the name and address of the person from whom received, and the kind and quantity of drugs received. Dispensing records must include the date, the name and address of the person to whom the drugs were dispensed, and the kind and quantity of drugs dispensed. Each record must be separately maintained, kept readily available and on hand for *three years.* The records may not be kept in code or in a foreign language. Schedule II substances can only be purchased on official D.E.A. forms from a licensed wholesaler or manufacturer. Other schedule substances may be purchased from wholesalers or manufacturers without D.E.A. forms. In no instance should any controlled substance for office use be purchased using prescription blanks. This means that controlled substances may not be purchased from a pharmacy which does not possess a wholesaler's license.

Record-Keeping and Storage Requirements

Failure to keep any record required may result in a $500.00 fine and if the failure was a deliberate attempt to circumvent the law the fine may be $1,000.00, 30 days imprisonment or both.

Security regulations require that Schedule II drugs must be adequately protected and stored to prevent theft. If a practitioner's supply exceeds 15 units (see Appendix II) of Schedule II and III controlled drugs an approved safe must be obtained for their storage. In no case shall a practitioner's controlled drug stock, no matter how small in amount, be left in an unlocked cabinet, automobile or unattended. Any loss, destruction or theft of narcotics shall be reported by all registrants within seventy-two hours to the Drug Control Division *and* to the narcotics shall be reported by all registrants within seventy-two hours to the Drug Control Division *and* to the Drug Enforcement Agency on form B.N.D. 106. Requests to destroy excess or undesired controlled drugs shall be made to the Drug Control Division, Department of Consumer Protection (566-4490).

The requirement under Section 19-443 to report drug dependent persons to the Commissioner of Health is now repealed, effective October 1, 1977.

Controlled Drug Prescriptions

All prescriptions for controlled drugs shall include:

1. the name and address of the patient, or the name and address of the owner of an animal and the species of the animal.
2. whether the patient is an adult or a child, or his specific age.
3. the compound or preparation prescribed and the amount thereof.
4. directions for use of the medication.
5. the name and address of the prescribing practitioner.
6. the date of issuance.
7. the D.E.A. number of the practitioner.

Prescriptions when written shall be written in ink or in indelible pencil or by typewriter. No duplicate, carbon or photographic copies and no printed or rubberstamped orders shall be considered valid prescriptions. No prescription or order for any controlled substance issued by a practitioner to an inanimate object or thing such as “office” or “bag” or “emergency kit” shall be considered a valid prescription. Prescriptions for Schedule II substances shall be signed by the prescribing practitioner at the time of issuance and previously signed orders for such Schedule II substances shall not be considered valid prescriptions. Such prescriptions may be refilled, in the case of C-III, C-IV and C-V substances for a maximum of 5 times within a 6 month period when authorized by prescriber, preferably at the time of writing the prescription. The original prescription and refill authorization for C-III, C-IV and C-V substances may be telephoned to the pharmacy.

A prescription for a Schedule II drug cannot be given over the telephone. A prescription *signed* by the physician *must be in the pharmacist's hand* before a Schedule II drug can be dispensed. However, *IN AN EMERGENCY*, a pharmacist may accept a telephone prescription for *an emergency quantity* (the quantity should not exceed the actual amount required to supply the needs of the patient during a 72 hour period) of a Schedule II drug provided the pharmacist knows or confirms the identity of the prescriber, promptly reduces the oral prescription to writing on a prescription blank, includes all the information required on a Schedule II prescription except the prescriber's signature and immediately files such temporary Rx as required by law. In addition, the prescriber must forward to the pharmacist within 72 hours a signed prescription covering the emergency dispensing. The signed prescription must have written on its face “Authorization for emergency dispensing” and the date of the oral order. The pharmacist must attach the signed prescription to the temporary prescription he prepared and keep both on file as required by law. In the event the prescriber does not forward the signed prescription within 72 hours, the authority to dispense an oral emergency prescription is deemed void and the pharmacist must notify *D.E.A.* of the prescriber's failure to forward the written prescription.

An emergency is defined by D.E.A. as a situation where:

a. the immediate administration of the controlled substance is necessary; b. no alternative treatment is available and c. it is not reasonably possible for the prescriber to provide a written prescription prior to dispensing.

If the prescriber wishes to prescribe the Schedule II drug *beyond the emergency period*, (the time necessary for the prescriber to reasonably supply the signed prescription) he must write a *separate* prescription to cover that amount and it cannot be dispensed until the pharmacist has the signed prescription in hand.

APPENDIX I
CONTROLLED DRUG LIST

Schedule II: Written prescriptions signed by physician required before dispensing by pharmacist.

1. Narcotic:

APC with Demerol
Codeine
Demerol
Dilaudid
Hycodan (Powder)
Leritene
Mepergan
Mepergan Fortis
Meperidine
Morphine
Cocaine
Numorphan
Pantopon
Percobarb
Percodan
Methadone
(Innovar) For Hospital
(Sublimaze) Use

2. Non-narcotic:

Amphetamine
Amobarbital
Amytal Sodium
Benzedrine
Desoxyn
Dexamyl
Dexedrine
Dextro-Amphetamine
Methamphetamine
Methaqualone
Methedrine
Nembutal
Parest
Pentobarbital
Quaalude
Ritalin
Secobarbital
Seconal
Tuinal
Amytal

Schedule III—IV—V: Oral prescription sufficient before dispensing by pharmacist.

1. Narcotic:

Actifed-C Expectorant
Ambenyl Expectorant
APC with Codeine
Brown Mixture
Codempiral
Codesal
Copavin
Dimetane Expectorant-DC
Empirin Comp with Codeine
Fiorinal with Codeine
Hycodan (Syrup)
Hycomine
Lomotil
Nembudeine
Novahistine-DH
Novahistine Expectorant
Paregoric
Phenaphen with Codeine
Phenergan Expectorant with Codeine
Phenergan VC Expectorant with Codeine
Robitussin-AC Expectorant
Stokes Expectorant
Scotussin Forte
Terpin Hydrate with Codeine
Tussar—2
Tussend
Tussionex
Tylenol with Codeine

Note: Any combinations with codeine are controlled drugs, e.g., cough syrups or pain relievers.

2. Non-narcotics:

Alurate
Bacarate
Benzphetamine
Bontril
Butabarbatol
Buticaps
Butiserpazide
Butiserpine
Butisol
Butizide
Carbrital
Chardonna
Chloral Hydrate
Chlordiazepoxide
Chlorphentermine
Clonazepam
Clonopin
Clorazepate
Clortermine
Cylert
Dalmane
Darvon
Deprol
Diazepam
Didrex
Diethylprupion
Doriden
Equagesic
Equanil
Eskabarb
Ethobral
Fenfluramine
Fiorinal
Flurazepam
Harmonyl-N
Ionamine
Librium
Luminal
Mazindol
Mebaral
Mebutamate
Mediatric
Melfiat
Mephobarbital
Meprobamate
Miltown
Nembudonna
Nembugesic
Noctec
Noludar

Oxazepam
Paraldehyde
Pemoline
Phendimstrazine
Phenobarbital
Phentermine
Placidyl
Plegine
Plexonal
Pondimin
Prazepam
Pre-Sate
Propoxyphene
Sanorex
Serax
Somnos
Statobex
Tenjate
Tepanil
Tranxene
Trimstat
Trimtabs
Valium
Voranil

APPENDIX II

A controlled substance *unit* is determined according to the following formula:
one unit equals:

a. 100 tablets or capsules.
b. 1 pint (473 ml) of a liquid not intended for injection.
c. ⅛ ounce (3.58 grams) of a powder, crystal, flake or granule.
d. 1 multiple dose vial of an injectable.
e. 10 suppositories.
f. 10 single-dose ampules, tubexes, dosettes or other single-dose package forms for injection whether as powder or in solution.

DEPARTMENT OF CHILDREN & YOUTH SERVICES

The Department of Children and Youth Services was created by the Connecticut General Assembly in 1969 to deal with juvenile corrections and prevention of delinquency. Since then the responsibilities for social services (1974) and mental health care (1976) for children and youth have been transferred to the Department.

The Department operates Long Lane School in Middletown, the state training facility for delinquent boys and girls committed to the department by the Juvenile Court. Long Lane services include medical and clinical treatment, education, recreation, social services, vocational and job training. It purchases extensive aftercare programs to supervise the rehabilitation of youngsters in community treatment centers. These include group homes, residential schools, foster homes and other professionally supervised living arrangements.

Children's protective and social services are administered by the Department of Children and Youth Services under a purchase of services agreement with the Department of Social Services. The staff accepts and investigates suspected cases of child abuse and/or neglect and works with parents to try to reduce or eliminate the cause of referral. DCYS protective services for abused and/or neglected children include medical assistance, legal aid, family counseling and temporary emergency shelter at the DCYS child care study and receiving home in Warehouse Point, Connecticut. Services also may include the purchase of homemaker, child care and family planning services if not otherwise available. The Department cooperates with the Connecticut Child Welfare Association in providing protective services, including use of the CCWA Child Abuse Careline (1-800-842-2288) for receiving reports of suspected child abuse and/or neglect.

General Statutes 17-38 defines child abuse as physical injury or injuries inflicted by other than accidental means, or injuries at variance with the history given: maltreatment, including but not limited to malnutrition, sexual molestation; cruel punishment, or deprivation of necessary food, clothing or shelter. This Connecticut statute mandates a number of professional groups, including physicians, surgeons, resident physicians, interns, medical examiners and nurses, to report all cases of suspected abuse immediately to State or local police or to the Department of Child and Youth Services, to be followed *within 72 hours by a written report* (Form W-136). Any person mandated to report who fails to report may be fined up to five hundred dollars ($500). Anyone who in good faith reports suspected abuse is granted immunity from civil or criminal liability.

The law provides that any physician examining a suspected abused child has the right to keep such child in the custody of a hospital for up to 96 hours without parental consent. The Department of Child and Youth Services maintains a confidential registry of suspected abused children, which is available at all times to mandated reporters. The expense for temporary care and custody shall be paid by the town.

The 1975 General Assembly made DCYS responsible for the diagnosis, care and treatment of mentally ill and/or emotionally disturbed children and youth. This program is conducted by psychiatric and related specialists at eight in-patient and out-patient facilities: High Meadows (Hamden), Albany Avenue Child

Guidance Center (Hartford), Greater Bridgeport Mental Health Center (Bridgeport), the Adolescent Drug Rehabilitation Program (Meriden), the Children's Unit at Connecticut Valley Hospital (Middletown), and adolescent programs conducted by the Mental Health Department under contract with DCYS at Fairfield Hills (Newtown) and at Norwich and Connecticut Valley Hospitals. DCYS also partially funds a number of privately operated child guidance clinics. Plans are also being developed for the utilization of the recently acquired Undercliff Regional Mental Health Center in Meriden which will become a psychiatric hospital for children and adolescents in the fall of 1978.

MEDIC ALERT FOUNDATION

Physicians who receive inquiries concerning identification tags for individuals with medical problems which should be known in an emergency may wish to refer the inquiry to:

Medic Alert
Foundation Headquarters
Turlock, California 95380

Medic Alert — 236-3667
645 Farmington Avenue
Hartford, Conn. 06105

CONNECTICUT POISON INFORMATION CENTER

A. Cardoni, Director
UConn Health Center
Farmington, Conn. 06032

For Poison Control Information, Call This Number First:
674-3456 or 674-3457 (24 hour daily coverage)

The Connecticut Poison Information Center has been transferred from the State Department of Health to the UConn Health Center. 24 hour information service is now available at the above emergency numbers. The following hospitals are designated as Poison Treatment centers.

HOSPITAL POISON TREATMENT CENTERS IN CONNECTICUT

City	*Names and Address*	*Telephone*	*Director*
Bridgeport	Bridgeport Hospital Poison Control Center 267 Grant Street 06602	384-3566	Lyle Stotts, M.D.
	St. Vincent's Hospital Poison Control Center 2820 Main Street 06606	334-1081	Ramona Byard, M.D.
Danbury	Danbury Hospital Poison Control Center 95 Locust Avenue 06810	744-2300	Peter Pratt, M.D.
Middletown	Middlesex Memorial Hospital Poison Control Center 28 Crescent Street 06457	347-9471	Clarence W. Harwood, M.D. L. Annino, Ph.G.
New Britain	New Britain General Hospital Poison Control Center 100 Grand Street 06050	224-5672	Tim Marcham, R. Ph. Asst.
New Haven	The Hospital of St. Raphael Poison Control Center 1450 Chapel Street 06511	789-3464	S. Lande, M.D.
	Yale-New Haven Hospital Poison Control Center 789 Howard Avenue 06504	436-1960	Thomas F. Dolan, Jr., M.D. Allan Myers, M.D.
Norwalk	Norwalk Hospital Poison Control Center 24 Stevens Street 06852	838-3611	Melvin Orlins, M.D.
Waterbury	St. Mary's Hospital Poison Control Center 56 Franklin Street 06702	756-8351	Charles H. Audet, Jr., M.D.

THE CONNECTICUT STATE MEDICAL SOCIETY
160 ST. RONAN STREET
NEW HAVEN, CONNECTICUT 06511

OFFICERS — 1978-1979

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Alternate: Andrew Canzonetti, Scovill Mfg. Co., Waterbury 06706	1/1/78-12/31/79
*E. Tremain Bradley, 78 Talmadge Hill Rd., New Canaan 06840	1/1/77-12/31/78
*Alternate: Sidney L. Cramer, 21 Woodland Street, Hartford 06105	1/1/77-12/31/78
*J. Alfred Fabro, 94 Church Street, Torrington 06790	1/1/77-12/31/78
*Alternate: Guy W. Van Syckle, 30 Hospital Avenue, Danbury 06810	1/1/77-12/31/78

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Elected by House of Delegates

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Carl C. Conrad, 24 Norwich Ave., Colchester 06415
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Marvin Garrell, 60 Katona Dr., Fairfield 06430
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Harvey N. Mandell, William Backus Hospital, Norwich 06360
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Robert L. Piscatelli, St. Mary's Hospital, Waterbury 06702
Desh R. Sindwani, Medical Center, Chestnut Hill Road, Stafford Springs 06076
Leo M. Smith, Stamford Hospital, Stamford 06902
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William W. Zeller, 200 Retreat Avenue, Hartford 06106
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President, Society, ex-officio
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Hugh L. Dwyer, 2 Church St. South New Haven 06519 (Internal Medicine) 1977-1982 (Nominee)
Leo P. Giardi, 561 New Britain Avenue, Hartford 06106 (Family Practice) 1978-1983 (Nominee)

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*(W) David T. Hochberg, 320 Pomfret St., Putnam 06260

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*County Nominee

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Lawrence B. Ahrens, 300 Main St., New Britain 06051
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J. Alfred Fabro, 94 Church St., Torrington 06790
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Leopold M. Trifari, 55 Ranch Rd., Hamden 06517
Frederick C. Weber, Jr., 185 Putnam Park, Greenwich 06830

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*County Nominee

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Town	*County*
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Amston	New London
Andover	Tolland
Ansonia	New Haven
Ashford	Windham
Avon	Hartford
Baltic	New London
Bantam	Litchfield
Barkhamsted	Litchfield
Beacon Falls	New Haven
Berlin	Hartford
Bethany	New Haven
Bethel	Fairfield
Bethlehen	Litchfield
Bloomfield	Hartford
Bolton	Tolland
Bozrah	New London
Branford	New Haven
Bridgeport	Fairfield
Bridgewater	Litchfield
Bristol	Hartford
Broad Brook	Hartford
Brookfield	Fairfield
Brookfield Center	Fairfield
Brooklyn	Windham
Burlington	Hartford
Byram	Fairfield
Canaan	Litchfield
Canterbury	Windham
Canton	Hartford
Centerbrook	Middlesex
Central Village	New London
Chaplin	Windham
Cheshire	New Haven
Chester	Middlesex
Chestnut Hill	Windham
Clinton	Middlesex
Colchester	New London
Colebrook	Litchfield
Collinsville	Hartford
Columbia	Tolland
Cornwall	Litchfield
Cornwall Bridge	Litchfield
Cos Cob	Fairfield
Coventry	Tolland
Cromwell	Middlesex
Danbury	Fairfield
Danielson	Windham
Darien	Fairfield
Deep River	Middlesex
Derby	New Haven
Devon	New Haven
Durham	Middlesex
Eastford	Windham
East Granby	Hartford
East Haddam	Middlesex
East Hampton	Middlesex
East Hartford	Hartford
East Hartland	Hartford
East Haven	New Haven
East Lyme	New London
Easton	Fairfield
East Norwalk	Fairfield
East Windsor	Hartford
East Woodstock	Windham
Ellington	Tolland
Elmwood	Hartford
Enfield	Hartford
Essex	Middlesex
Fairfield	Fairfield
Falls Village	Litchfield
Farmington	Hartford
Forestville	Hartford
Franklin	New London
Gales Ferry	New London
Georgetown	Fairfield
Gilman	New London
Glastonbury	Hartford
Glenbrook	Fairfield
Glenville	Fairfield
Goshen	Litchfield
Granby	Hartford
Greens Farms	Fairfield
Greenwich	Fairfield
Griswold	New London
Groton	New London
Guilford	New Haven
Haddam	Middlsex
Hadlyme	New London
Hamburg	New London
Hamden	New Haven
Hampton	Windham
Hawleyville	Fairfield
Hartford	Hartford
Hartland	Hartford
Harwinton	Litchfield
Hazardville	Hartford
Hebron	Tolland
Higganum	Middlesex
Huntington	Fairfield
Ivoryton	Middlesex
Jewett City	New London
Kensington	Hartford
Kent	Litchfield
Killingly	Windham
Killingworth	Middlesex
Lakeville	Litchfield
Lebanon	New London
Ledyard	New London
Lisbon	New London
Litchfield	Litchfield
Long Hill	Fairfield
Lyme	New London
Madison	New Haven
Manchester	Hartford
Mansfield	Tolland
Mansfield Center	Tolland
Mansfield Depot	Tolland
Marble Dale	Litchfield
Marlborough	Hartford
Meriden	New Haven
Middlebury	New Haven
Middlefield	Middlesex
Middletown	Middlesex
Milford	New Haven
Monroe	Fairfield
Montville	New London
Moodus	Middlesex
Moosup	Windham
Morris	Litchfield
Morris Cove	New Haven
Mount Carmel	New Haven
Mystic	New London
Naugatuck	New Haven
New Britain	Hartford
New Canaan	Fairfield
New Fairfield	Fairfield
Newfield	Middlesex
New Hartford	Litchfield
New Haven	New Haven
Newington	Hartford
New London	New London
New Milford	Litchfield
New Preston	Litchfield
Newtown	Fairfield
Niantic	New London
Nichols	Fairfield
Noank	New London
Norfolk	Litchfield
Noroton	Fairfield
North Branford	New Haven
Northford	New Haven
North Canaan	Litchfield
North Granby	Hartford
Northfield	Litchfield
North Haven	New Haven
North Madison	New Haven
North Stonington	New London
North Woodbury	Litchfield
Norwalk	Fairfield
Norwich	New London
Norwichtown	New London
Oakdale	New London
Oakville	Litchfield
Old Greenwich	Fairfield
Old Lyme	New London
Old Saybrook	Middlesex
Orange	New Haven
Oxford	New Haven
Pawtucket	New London
Plainfield	Windham
Plainfield	Hartford
Plantsville	Hartford
Pleasant Valley	Litchfield
Plymouth	Litchfield
Pomfret	Windham
Poquonock	Hartford
Portland	Middlesex
Preston	New London
Prospect	New Haven
Putnam	Windham
Quaker Hill	New London
Redding	Fairfield
Ridgefield	Fairfield
Riverside	Fairfield
Riverton	Litchfield
Rockfall	Middlesex
Rocky Hill	Hartford
Rockville	Tolland
Rowayton	Fairfield
Roxbury	Litchfield
Salem	New London
Salisbury	Litchfield
Sandy Hook	Fairfield
Saybrook	Middlesex
Saybrook Pt.	Middlesex
Scotland	Windham
Seymour	New Haven

Town	County
Sharon	Litchfield
Sherman	Fairfield
Shippan Pt.	Fairfield
Silvermine	Fairfield
Simsbury	Hartford
Somers	Tolland
Southbury	New Haven
South Coventry	Tolland
South Glastonbury	Hartford
Southington	Hartford
South Kent	Litchfield
South Manchester	Hartford
South Norwalk	Fairfield
Southport	Fairfield
South Windham	Windham
South Woodstock	Windham
South Windsor	Hartford
Sprague	Tolland
Springdale	Fairfield
Stafford Springs	Tolland
Stamford	Fairfield
Stepney Depot	Fairfield
Sterling	Windham
Stonington	New London
Storrs	Tolland
Stratford	Fairfield
Suffield	Hartford
Taconic	Middlesex
Taftville	New London
Tariffville	Hartford
Terryville	Litchfield
Thomaston	Litchfield
Thompson	Windham
Thompsonville	Hartford
Tolland	Tolland
Torrington	Litchfield
Trumbull	Fairfield
Uncasville	New London
Union	Tolland
Union City	New Haven
Unionvillle	Hartford
Vernon	Tolland
Versailles	New London
Voluntown	New London
Wallingford	New Haven
Wapping	Hartford
Warehouse Pt.	Hartford
Warren	Litchfield
Washington	Litchfield
Waterbury	New Haven
Waterford	New London
Watertown	Litchfield
Weatogue	Hartford
Westbrook	Middlsex
West Cornwall	Litchfield
West Hartford	Hartford
West Haven	New Haven
Weston	Fairfield
Westport	Fairfield
West Simsbury	Hartford
West Stafford	Tolland
West Willington	Tolland
Wethersfield	Hartford
Willimantic	Windham
Willington	Tolland
Wilton	Fairfield
Winchester	Litchfield
Windham	Windham
Windsor	Hartford
Windsor Locks	Hartford
Winsted	Litchfield
Wolcott	New Haven
Woodbridge	New Haven
Woodbury	Litchfield
Woodmont	New Haven
Woodstock	Windham

ROSTER OF MEMBERS 1978

Fairfield County Association

President: Daniel W. Doctor, 129 King's Hwy, No., Westport 06880
Vice-President: James E. Harshbarger, 50 Ridgefield Ave., Bridgeport 06610
Secretary: George J. Geanuracos, 50 Ridgefield Ave., Bridgeport 06610
Treasurer: H. David Frank, 114 State, Bridgeport 06603
Councilor: John J. McGarry, 36 Old King's Hwy, So., Darien 06820
Associate Councilors:
T. Peter Jameson, 18 Farview Ave., Danbury 06810
Edith M. Beck, 56 Lafayette Pl., Greenwich 06830
Executive Secretary: Mr. Leonard R. Tomat
Executive Office: 60 Katona Dr., Fairfield 06430
Annual Meeting, Second Tuesday in April
Semi-Annual Meeting, First Wednesday in October

BETHEL 06801

1974 Binnie, Hugh Sharp Polson, 236 Greenwood Ave.
1977 Fink, Theodore, Rt. 6, Stony Hill
1977 Golenbock, Robert Bruce, Rt. 6, Stony Hill
1976 Shapiro, David, 155 Greenwood Ave.
1938 Trimpert, Albert Joseph, 8 Blackman Ave.
1976 Volpintesta, Edward Joseph, 155 Greenwood Ave.
1939 Wolfson, Dexter, 14 Grassy Plain

BRIDGEPORT

1974 Adefuin, Zosimo Adea, 1475 Barnum Ave. 06610
1965 Alexander, James Maurice, 827 North Ave. 06606
1976 Ali, Sheikh M. Yousuf, 1475 Barnum Ave. 06610
1932 Alpert, Max, 881 Lafayette 06603
1944 Amarant, Leo, 881 Lafayette 06603
1975 Ambrose, Paul, 2472 East Main 06610
1953 Anderson, Harry Brutus, P.O. Box 1779 06601
1973 Armm, Milton F., 1438 Park Ave. 06604
1971 Auerbach, Sumner Robert, 50 Ridgefield Ave. 06610
1978 Axline, John Warren, 3715 Main 06606
1973 Bader, Lewis Martin, 881 Lafayette 06604
1968 Barrero, Ezequiel Fernandez, 401 Noble Ave. 06608
1941 Beck, Sidney Henry, 51 Golf View Ter. 06603
1974 Beres, Milan, 50 Ridgefield Ave. 06610
1970 Berkun, Sumner Gerald, 881 Lafayette Blvd. 06604
1956 Bernstein, Jerome, 340 Capitol Ave. 06606
1977 Bernstein, Marshall Irving, 881 Lafayette 06604
1961 Berry, Robert W., 2075 North Ave. 06604
1969 Bersier, Andre Marc, 2660 Main 06606
1928 Biehn, Sidney Lister, 130 Pinepoint Dr. 06606
1946 Birney, Thomas Peter, 1984 Park Ave. 06604
1949 Blaney, Cyril Chandler, 3203 Main 06606
1952 Blank, Miriam Bennett, 420 Brooklawn Ave. 06604
1963 Blank, Victoria E., 3321 Park Ave. 06604
1978 Blumenfeld, Ronald I., 4000 Park Ave. 06604
1935 Bogin, Maxwell, 340 Capitol Ave. 06606
1973 Boreyko, Christopher Joseph, 3715 Main 06606
1963 Borsos, Lajos A., 2660 Main 06606
1954 Bousa, Walter Shackley, 3163 Main 06606
1959 Bradley, Edward Grenelle, 50 Ridgefield Ave. 06610
1947 Braun, Rudolf, 525 Clinton Ave. 06605
1971 Bravo, Anthony John, 50 Ridgefield Ave. 06610
1975 Breyan, Nicholas Richard, 50 Ridgefield Ave. 06610
1941 Brier, Hyman David, 2574 Main 06606
1940 Brooks, Paul Lester, 1260 East Main 06608
1974 Brown, Paul Woodrow, St. Vincent's Hospital 06606
1955 Burke, William Harris, 1026 Park Ave. 06604
1969 Byard, Ramona Marie, St. Vincent's Hospital 06606
1943 Cacace, Vincent Anthony, 1438 Park Ave. 06604
1975 Calabrese, Carmine Timothy, 2660 Main 06606
1976 Calabrese, Patrick Richard, 1475 Barnum Ave. 06610
1947 Camarda, Anthony L., 690 Clinton Ave. 06604
1968 Canter, Norman Michael, 50 Ridgefield Ave. 06610
1945 Capobianco, Arthur Paul, 508 Noble Ave. 06608
1962 Capodilupo, Vincent Michael, 754 Clinton Ave. 06604
1946 Cardone, Michael James, 2989 Main 06606
1974 Carolan, Patrick James, 3715 Main 06606
1976 Carroll, Richard Edwin, 340 Capitol Ave. 06606
1947 Caserta, Silvio Joseph, 880 North Ave. 06606
1976 Cavaliere, Michael John, 798 North Ave. 06606
1947 Cavaliere, Vincent J., 798 North Ave. 06606
1973 Chadda, Shashi K. B., St. Vincent's Hospital 06606
1975 Chinniah, Anton V., 50 Ridgefield Ave. 06610
1949 Chiota, Joseph A., 562 Boston Ave. 06610
1976 Choy, Octavio Gregorio, 50 Ridgefield Ave. 06610
1954 Cleaver, Robert S. Jr., 50 Ridgefield Ave. 06610
1976 Cocco, Thomas D., 388 Brooklawn Ave. 06604
1959 Cohen, Stanley Leonard, 1026 Park Ave. 06604
1952 Connell, Thomas Hilbert, Jr., 50 Ridgefield Ave. 06610
1976 Connolly, Joseph Forbes, 1785 Boston Ave. 06610
1959 Cook, William Henry, 2660 Main 06606
1967 Cooney, Gerald Evans, 3163 Main 06606
1977 Cooper, Everett Bruen, 2800 Main 06606
1954 Corley, Eugene Henry, 1026 Park Ave. 06604
1963 Corso, Philip Francis, 2660 Main 06606
1963 Creatura, John Anthony, 50 Ridgefield Ave. 06610
1947 Curley, William Henry, Jr., 3715 Main 06606
1971 D'Aiuto, Michael Leonard, 50 Ridgefield Ave. 06610
1972 Dalal, Bipinchand Jivanchand, 695 Park Ave. 06604
1950 Dean, Michael Augustine, 2660 Main 06606
1972 DeBernardo, Robert Louis, 3715 Main 06606
1976 DeBonis, Gerald Michael, 3715 Main 06606
1952 DeLibero, Anthony F., 698 Capitol Ave. 06606
1950 DeLuca, Joseph Vincent, 251 North Ave. 06606
1947 Deren, M. David, 1260 Park Ave. 06604
1978 Dila, Carl J., 2660 Main 06606
1954 Doering, Robert Warren, 1836 Noble Ave. 06610
1976 Dogali, Michael, 2660 Main 06606
1958 Doherty, Harold Edward, 3175 Main 06606
1958 Dolan, Everitt Patrick, 2660 Main 06606
1963 Donnelly, Vincent Peter, 1026 Park Ave. 06604
1977 Duerr, L. Sean, 50 Ridgefield, Ave. 06610
1954 Dugas, Joseph Albert, 660 Kossuth 06608
1941 Duzmati, Paul Peter, 1904 Boston Ave. 06610
1963 Dworken, Donald Savin, 50 Ridgefield Ave. 06610
1954 Eckels, Howard Samuel, 4747 Main 06606
1937 Eimas, Aaron, 340 Capitol Ave. 06606
1970 Eisenberg, Joel Howard, 4749 Main 06606
1948 Elliott, Frank George, Jr., Bridgeport Hospital 06610
1971 Eras, Philip, 3715 Main 06606
1976 Escobar, Santiago, 2837 Main 06606
1939 Esposito, Joseph John, 50 Ridgefield Ave. 06610
1968 Fazzone, Andrew Christian, 148 Mill Hill Ave. 06610
1973 Federico, Frank Nicholas, 3715 Main 06606
1969 Feldman, Morton George, 881 Lafayette 06603
1961 Feldman, Saul Morry, 3715 Main 06606
1956 Flagg, James Anthony, Bridgeport Hospital 06610
1965 Fleisher, Philip, 1438 Park Ave. 06604
1969 Flemister, Adolph Samuel, 944 Fairfield Ave. 06605
1957 Fox, Henry John, 10 Washington Ave. 06604
1954 Frank, Howard David, 114 State 06603
1956 Frenkel, Henry Hans, 827 North Ave. 06606

1958 Fromm, Stanley M., 260 Main 06606
1974 Gargano, Paul Andrew, 114 State 06604
1956 Gariepy, John Arthur, 50 Ridgefield Ave. 06610
1968 Garofalo, George Anthony, 30 DeRamo Pl. 06606
1976 Garver, Eric Michael, 4749 Main 06606
1951 Geanuracos, George James, 50 Ridgefield Ave. 06610
1974 Gianetti, Charles Donald, 3715 Main 06606
1927 Gildea, Mark Andrew, 2600 Park Ave. 06604
1957 Gill, Nicholas Patrick, 50 Ridgefield Ave. 06610
1976 Gilmore, Judith M., 2660 Main 06606
1962 Glass, Mac Ellis Kopel, 50 Ridgefield Ave. 06610
1948 Glass, William I., 881 Lafayette 06603
1950 Goodrich, Albert, 50 Ridgefield Ave. 06610
1974 Gossart, Robert Marius, 782 Clinton Ave. 06604
1976 Granger, Donald Peter, 50 Ridgefield Ave. 06610
1955 Grant, James Mullett, 3715 Main 06606
1973 Grayer, David I., 4747 Main 06606
1943 Grossman, John Henry, 144 Golden Hill 06603
1941 Gulash, John Robert, 562 Boston Ave. 06610
1949 Guttman, Tibor, 1549 Fairfield Ave. 06605
1975 Haghighat, Ahmad, 2820 Main 06606
1973 Hamaty, Daniel, 4000 Park Ave. 06604
1967 Hanley, Hilda Christina, 2660 Main 06606
1963 Harshbarger, James E., 50 Ridgefield Ave. 06610
1972 Hau, Kee-Hung, 50 Ridgefield Ave. 06610
1975 Heller, Charles I., 50 Ridgefield Ave. 06610
1970 Heller, Warren, 3715 Main 06606
1938 Hennessey, Joseph Gerard, 482 Brewster 06605
1975 Herman, Myer, City Health Dept. 06608
1978 Hernandez-Trujillo, Juan Manuel, 184 Jewett Ave. 06606
1977 Herzlinger, Robert Allen, 267 Grant 06602
1975 Hill, Paul Raymond, 3411 Main 06606
1961 Homza, L. Ronald, 2800 Main 06606
1963 Hope-Ross, Peter Edward, 695 Park Ave. 06604
1933 Horn, Benjamin, 3900 Park Ave. 06604
1946 Horowitz, Isaac, 754 Clinton Ave. 06604
1955 Horowitz, Joseph Lewis, 2727 Main 06606
1972 Iodice, Michael Thomas, 50 Ridgefield Ave. 06610
1956 Ireland, Elwood Fremont, Jr., 50 Ridgefield Ave. 06610
1962 Jamshidi, Ahmed, 1475 Barnum Ave. 06610
1962 Johnson, George Blake, Jr., 2952 Main 06606
1942 Kaplan, Leon, 881 Lafayette 06603
1960 Kasper, Richard Francis, 2085 Madison Ave. 06606
1969 Kauders, James Theodore, 2727 Main 06606
1967 Kay, Chester J., 881 Lafayette Blvd. 06604
1969 Kelleher, Michael Joseph, 2660 Main 06606
1946 Kleinman, Harold Louis, 2051 North Ave. 06604
1948 Kogut, Henry Vincent, 50 Ridgefield Ave. 06610
1970 LaMastra, Philip Michael, 267 Grant 06602
1964 Landwirth, Julius, Bridgeport Hospital 06610
1961 Lapinski, Lucian Stanley, 881 Lafayette 06603
1962 Lawrence, John James, 2660 Main 06606
1962 Lebowitz, Wallace Bernard, 2660 Main 06606
1974 Lee, Hee Jong, 226 Mill Hill Ave. 06610
1963 Lee, Nam Hyung, 267 Grant 06610
1959 Leone, Paul Vincent, 457 Mill Hill Ave. 06610
1943 Lesko, Joseph Michael, 144 Golden Hill 06603
1933 Levinsky, Maurice, 1425 Noble Ave. 06610
1956 Levy, Theodore Steinberg, 2727 Main 06606
1972 Lewin, Marvin Lionel, 50 Ridgefield Ave. 06610
1976 Link, Richard Joseph, 1475 Barnum Ave. 06610
1973 Lisi, Kenneth Ronald, 29 Federal 06606
1961 Lobdell, David Hill, St. Vincent's Hospital 06606
1942 Lopatin, Colman, 971 Fairfield Ave. 06605
1973 Lovanio, Richard Gabriel, 3715 Main 06606
1975 Lucia, Walter, 2660 Main 06606
1948 Luciano, Michael Charles, 2089 North Ave. 06604
1947 Lynch, Vincent Aloysius, 798 North Ave. 06606
1944 Lyon, Grover Arthur, 2009 North Ave. 06604
1975 Mack, Jane Andrews, 815 Penbroke 06608
1955 Madwed, Alice Ente, 25 Saxton Dr. 06604
1976 Maiocco, Kenneth Joseph, 4749 Main 06606
1957 Malyska, Francis Anthony, 4747 Main 06606
1971 Mangieri, John Vito, 50 Ridgefield Ave. 06610
1955 Maniatis, William Richard, 881 Lafayette 06603
1956 Manjoney, Robert John, 2727 Main 06606
1958 Manjoney, Vincent August, 3715 Main 06606
1969 Marks, Eugene M., 939 Barnum Ave. 06602
1966 Marrash, Samir E., 2075 North Ave. 06604
1951 Martelon, George Fred, 1285 Boston Ave. 06602
1972 Masi, Anthony Vincent, 4695 Main 06606
1942 Massey, Daniel M., Bridgeport Hospital 06610
1965 McCullough, Charles Discant, 3163 Main 06606
1967 McLoughlin, Peter Joseph, 1984 Park Ave. 06604
1976 McQuade, G. William, 3715 Main 06606
1952 Meltzer, Saul B., 2660 Main 06606
1970 Mergenthaler, Francis William, 2075 North Ave. 06604
1946 Meshken, Jacob, 2800 Main 06606
1964 Methot, Lawrence Gerard, 3715 Main 06606
1964 Michaels, Arthur Hatzi, 2167 North Ave. 06604
1961 Michalka, Joseph John, 114 State 06603
1977 Miller, Stuart, 1836 Noble Ave. 06610
1947 Molnar, George J., 135 Brooklawn Ave. 06604
1932 Mooney, Sydney, 881 Lafayette 06603
1946 Morris, Felix R., 953 East Main 06608
1973 Musto, Anthony, 50 Ridgefield Ave. 06610
1948 Nagourney, David, 1756 East Main 06610
1978 Nallainathan, Sanath-Kumar, 50 Ridgefield Ave. 06610
1977 Napolitano, Guido John, 50 Ridgefield Ave. 06610
1948 Newman, Abbott A., 2660 Main 06606
1957 Niesyn, Erwin, 50 Ridgefield Ave. 06610
1977 Nijensohn, Daniel E., 2660 Main 06606
1954 Noonan, Robert Henry, 385 Noble Ave. 06608
1978 Norooz, Hedayat A., 50 Ridgefield Ave. 06610
1968 Oesau, Harold Thomas, Jr., 50 Ridgefield Ave. 06610
1947 O'Looney, John J. Jr., 1075 Noble Ave. 06608
1948 Olsavsky, John Cyril, 10 Washington Ave. 06604
1944 Oster, Kurt A., 881 Lafayette 06603
1947 Owens, Andrew Paul, 50 Ridgefield Ave. 06610
1976 Pace, Salvatore Anthony, 50 Ridgefield Ave. 06610
1940 Panettieri, Andrew Joseph, Bridgeport Hospital 06610
1974 Park, Yong Joon, 50 Ridgefield Ave. 06610
1942 Parker, Ralph Layton, 881 Lafayette 06603
1937 Pascal, Thomas J., 1560 Noble Ave. 06610
1944 Pasquariello, D. William, 2969 Main 06606
1940 Penner, Sidney Lincoln, 158 Mill Hill Ave. 06610
1964 Peralta, Carlos, 881 Lafayette 06603
1970 Perlman, Jerold M., 50 Ridgefield Ave. 06610
1972 Pesce, Joseph Raymond, 3715 Main 06606
1978 Pistey, Warren Robert, Bridgeport Hospital 06610
1970 Pleban, Walter Edward, 50 Ridgefield Ave. 06610
1953 Pope, Russell, Bridgeport Hospital 06610
1968 Portnoy, Lewis Morton, 695 Park Ave. 06604
1968 Pua, Purificacion, 457 Mill Hill Ave. 06610
1958 Ragusa, Robert Paul, 4747 Main 06606
1975 Ramachandran, MyLvaganam, 114 State 06604
1963 Ramirez, Louis Manuel, 754 Clinton Ave. 06604
1977 Rankin, Donald Craig, Park City Hospital 06604
1970 Rapoport, Melvyn, 50 Ridgefield Ave. 06610
1978 Ravden, Reuben, 695 Park Ave. 06604
1972 Reichgut, Martin H., 3715 Main 06606
1942 Resnik, Harry, 26B Greenhouse Rd. 06606
1976 Rhee, Chong, H., 1475 Barnum Ave. 06610
1950 Riccio, Frank Joseph, 923 East Main 06608
1967 Roach, James Patrick, 3715 Main 06606
1975 Robbins, David I., 2820 Main 06606
1976 Rockwell, William James, 1984 Park Ave. 06604
1961 Rosenbaum, Nathan, 4747 Main 06606
1944 Rosenberg, Hans August, 425 Beechwood Ave. 06604
1959 Rosenberg, Murray Alan, 881 Lafayette 06604
1946 Rosenberg, Saul, 1950 Park Ave. 06604
1974 Rosman, Martin, 50 Ridgefield 06610
1946 Rosner, Fred, 2333 North Ave. 06604
1974 Ruan, Wittaya, 50 Ridgefield Ave. 06610
1973 Rusch, Ortwin Ferdinand, 2820 Main 06606
1949 Russo, John Rocco, 3296 Main 06606

1948 Russo, Robert Dante, 10 Washington Ave. 06604
1975 Russo, Robert Dante, Jr., 30 Anchorage Dr. 06605
1949 Saidel, Joseph W., 932 East Main 06608
1976 Salvio, Daniel Gennovo, 401 Noble Ave. 06608
1954 Samuelson, Arthur Wesley, 50 Ridgefield Ave. 06610
1958 Santella, Salvatore Michael, 2210 Park Ave. 06604
1975 Santilli, John, Jr., 4695 Main 06606
1976 Santomauro, Anthony Gerard, 4747 Main 06606
1963 Saraczynski, Daniel Leon, 2001 Park Ave. 06604
1948 Savin, Sanford, 2660 Main 06606
1971 Sax, Robert Eugene, 782 Clinton Ave. 06604
1942 Scalzi, Leonard Conrad, 924 Noble Ave. 06608
1967 Scavo, Vincent Joseph, 3715 Main 06606
1978 Schactel, Bernard P., 267 Grant 06602
1972 Schare, George David, 340 Capitol Ave. 06606
1975 Schlein, Allen P., 837 Fairfield Ave. 06604
1954 Sciarrillo, Joseph John, 3354 Main 06606
1938 Sekerak, Richard John, 1400 East Main 06608
1976 Senathirajah, Kanagarajanayagam N., 50 Ridgefield Ave. 06610
1977 Shah, Subhash O., 50 Ridgefield Ave. 06610
1968 Shah, Urmila C., 881 Lafayette 06603
1977 Shah, Varsha S., Ct. Health Plan, 4000 Park Ave. 06604
1968 Shanley, Walter Thomas, 4749 Main 06606
1948 Shea, Joseph Patrick, 2075 North Ave. 06604
1972 Sheiman, Robert Aaron, 370 Capitol Ave. 06606
1946 Sheiman, Samuel Charles, 1539 Park Ave. 06604
1947 Sherman Irving J., 2660 Main 06606
1972 Shimkin, Peter Michael, 50 Ridgefield Ave. 06610
1944 Sholler, Nicholas A., 2148 North Ave. 06604
1975 Sica, Vincent Frank, 881 Lafayette Blvd. 06604
1976 Siegel, Kenneth Colman, 370 Capitol Ave. 06604
1971 Silverman, Donald Richard, 3715 Main 06606
1958 Simkovitz, Jaime, 881 Lafayette Blvd. 06604
1968 Simpson, John Arthur, 1285 Boston Ave. 06602
1939 Simses, John Peter, 1151 Park Ave. 06604
1976 Simses, John Peter, Jr., 1151 Park Ave. 06604
1978 Sivanesan, Ponniah, 3715 Main 06606
1950 Small, Alan Robert, 4747 Main 06606
1962 Small, John Howard, 50 Ridgefield Ave. 06610
1963 Sorge, Dominick Vincent, St. Vincent's Hospital 06606
1960 Souvlis, Charalambos D., 881 Lafayette 06603
1971 Stallworth, Vera Martin, 2625 Park Ave. 06604
1976 Stanton, Robert Alan, 50 Ridgefield Ave. 06610
1971 Steremberg, Zuli, 29 Federal 06606
1964 Stiff, David Parker, St. Vincent's Hospital 06606
1973 Stotts, H. Lyle, Bridgeport Hospital 06610
1976 Sullivan, Barbara E., Park City Hospital 06604
1952 Sullivan, John Lawrence, 50 Ridgefield Ave. 06610
1975 Sulzycki, M. Michael, St. Vincent's Hospital 06606
1973 Taubin, Howard Leslie, 114 State 06603
1953 Thurmond, James Ernest, 50 Ridgefield Ave. 06610
1976 Torstenson, Guy E., St. Vincent's Hospital 06606
1947 Turetsky, Samuel, 2357 Fairfield Ave. 06605
1943 Unger, Milton, 923 East Main 06608
1932 Uvitsky, Irving Harry, 3900 Park Ave. 06604
1971 Vallone, Anthony Joseph, 4749 Main 06606
1976 Van Der Aue, George Lane, 2820 Main 06606
1966 van der Veen, Teunis, Bridgeport Hospital 06610
1967 Vincent, Norman Robert, 10 Washington Ave. 06604
1976 Viner, Nicholas Andre, 50 Ridgefield Ave. 06610
1941 Vioni, R. Edward, 3450 Main 06606
1955 Walsh, James Francis, III, 2660 Main 06606
1948 Walzer, Eugene Harold, 540 Clinton Ave. 06605
1942 Ward, James P., 881 Lafayette 06603
1951 Wasserman, Edward, 881 Lafayette 06603
1968 Wasson, Dennis, 50 Ridgefield Ave. 06610
1971 Weglarz, Stanley S., 1475 Barnum Ave. 06610
1973 Weinstein, Alan Harvey, 50 Ridgefield Ave. 06610
1965 Weinstein, Albert, 340 Capitol Ave. 06606
1958 Weinstein, Norman, 340 Capitol Ave. 06606
1948 Weise, Ellwood Carl Jr., 50 Ridgefield Ave. 06610
1977 Williams, Joseph Henry, 2045 Park Ave. 06604
1977 Wycliffe, Nathaniel Davis Dan, Ct. Health Plan, 4000 Park Ave. 06604
1973 Yu, Henry Chun-Chiang, 2660 Main 06606
1969 Zingmond, Erwin, 4697 Main 06606
1943 Zsiga, Elmo Douglas, 881 Lafayette Blvd. 06604
1975 Zuckerman, Howard Leonard, 3715 Main 06606

BROOKFIELD 06804

1967 Bowen, Willet Raynor, Route 7
1975 Buscemi, Arthur A., The Pillars RFD #4
1968 DiGrazia, Paul Vincent, Route 7
1971 Foye, Gerard John, Brookfield Prof. Bldg., Rt. 7
1977 Hansen, Raoul Mark, 304 Federal Rd.
1973 Kayal, Frederick Abraham, Brookfield Prof. Ctr.
1975 Nesi, Roland Michael, Brookfield Professional Center
1970 Soletsky, Harry B., Brookfield Prof. Ctr.

BROOKFIELD CENTER 06805

1937 Rogol, Louis, 8 Ledgewood Apts.

COS COB 06807

1940 Ayres, Payson Bryan, 10 Old Post Rd.
1940 Bria, William Francis, Diamond Hill
1959 Clayton, James Augustus, Clover Pl.
1965 Garb, Allan E., 49 Dandy Dr.
1977 Herzig, Steven Arin, 8 Sinawoy Rd.
1963 Koenig, Allen Russell, 78 Dandy Dr.
1952 Murphy, John Philip, 8 Sinawoy Rd.
1967 Suerig, Karl Christian, Mimosa Dr.

DANBURY

1964 Albanese, Antonio Nicola, 13 Hospital Ave. 06810
1962 Azar, Marcel A., 111 West 06810
1963 Badan, Bohodar, Danbury Hospital 06810
1963 Balmaseda, Rene Y., 92 Locust Ave. 06810
1958 Barese, Angelo Mario, 95 Locust Ave. 06810
1953 Barysh, Noah, 93 West 06810
1976 Beaudoin, James Ronald, 6 Walnut 06810
1973 Berger, David S., 24 Hospital Ave. 06810
1951 Blansfield, Henry Nelson, 46 Federal Rd. 06810
1975 Burris, John Ovie, Glen Hill Rd. 06810
1976 Casazza, Albert Raymond, Glen Hill Rd. 06810
1952 Castro, Roger Perez, 136 South 06810
1952 Cherry, Joseph Bentley, 46 Federal Rd. 06812
1976 Cohen, Herbert George, Linden Crest Dr. 06810
1961 Coleman, Paul Joseph, 92 Locust Ave. 06810
1977 Copen, David L., Danbury Hospital 06810
1965 Daniels, John C., 92 Locust Ave. 06810
1959 Dawe, Edwin Lloyd, 8 West 06810
1976 DeFrance, John Homer, Danbury Hospital 06810
1947 Edson, Dean Harding, 2 Hospital Ave. 06810
1947 Epstein, Benjamin, 8 Locust Ave. 06810
1975 Exconde, Fidel V. Jr., 16 Hospital Ave. 06810
1974 Falkenstein, Ralph Jay, Danbury No. Shopping Center 06810
1967 Fand, Robert, 79½ North 06810
1963 Fernand, Edwin George, 46 Federal Rd. 06812
1973 Fischl, Robert A., 16 Hospital Ave. 06810
1959 Fornshell, Robert Pearce, 85 Osborne 06810
1931 Gaffney, John James, 34 Clapboard Ridge Rd.
1978 Garfinkel, Howard Benjamin, 2 Glen Hill Rd. 06810
1958 Gianfranceschi, Guido Richard, 35 Tamarack Rd. 06812
1972 Glucksman, Myron Lawrence, 92 Locust Ave. 06810
1960 Goldberg, Morley Moses, 84 Locust Ave. 06810
1958 Goldman, Alvin, 84 Locust Ave. 06810
1974 Goldstein, Leonard Harry, 84 Locust Ave. 06810
1969 Goldstein, William B., 95 Locust Ave. 06810
1929 Goldys, Frank Max, 209 Main 06810
1976 Gordon, Jonathan Mark, Glen Hill Rd. 06810
1957 Greenfield, Michael, Danbury Shopping Center, North 06810

1973 Hines, Ann Hanahoe, 13 Washington Ave. 06810
1968 Homer, Donald R., Danbury Hospital 06810
1954 Hubbard, Richmond Chase, 59 Main 06810
1957 Jameson, Marjorie Elizabeth, 18 Fairview Ave. 06810
1957 Jameson, Thomas Peter, 18 Fairview Ave. 06810
1953 Jovell, John William, 46 Main 06810
1954 Joy, Robert Chamberlain, 21 Ridge Rd.-West Terrace 06810
1974 Keller, Barry Roy, 84 Locust 06810
1960 Kenter, Ali Mahmut, 46 Federal Rd. 06810
1963 Kilhenny, Charles, 2 Hospital Ave. 06810
1977 Kingsley, Stephen Wayne, 2 Glen Hill Rd. 06810
1976 Kotch, Arthur, Glen Hill Rd. 06810
1977 Kremenitzer, Martin William, 16 Hospital Ave. 06810
1960 Kuczko, Edward Paul, 35 Tamarack Ave. 06810
1974 LaGratta, Roger John, 85 Osborne 06810
1971 Lawson, Ian Richard, Danbury Hospital 06810
1977 Licht, Peter David, Danbury Hospital 06810
1954 Machcinski, Victor Anthony, Danbury Shopping Center 06810
1978 Magavi, Nirmalamma S., 4 Chambers Rd. 06810
1976 Magavi, Shivayogi V., 58 Division 06810
1970 Malloy, Thomas McKevitt, 85 Osborne 06810
1965 Manlapaz, Jesse Schmidt, 87 West 06810
1975 Mashman, Jan Howard, 16 Hospital Ave. 06810
1962 Mauks, Charles William, 79 West 06810
1977 Mauks, Kathleen Susan, 79 West 06810
1957 McDermott, John Joseph, 54 Main 06810
1976 Miller, Jeffrey D., 8 Downs 06810
1958 Miller, Robert George, 70½ West Plaza 06810
1977 Nipper, Thomas Patrick, 16 Hospital Ave. 06810
1961 Orr, Jack Thomas, 30 Hospital Ave. 06810
1974 Patil, Vijay M., 120 Chambers Rd. 06810
1949 Patterson, Harold Calvin, 93 West 06810
1976 Pezzimenti, John Francis, Glen Hill Rd. 06810
1970 Prince, Marvin Lawrence, 2 Glen Hill Rd. 06810
1972 Raff, Ira L., Richter Dr. 06810
1949 Randolph, Martin Francis, 70 Deer Hill Ave. 06810
1977 Reed, David Michael, 158 Deer Hill Ave. 06810
1978 Richter, Michael W., Danbury Hospital 06810
1975 Ripps, Ronald A., 30 Hospital Ave. 06810
1971 Rose, Turpin Harry, 16 Hospital Ave.
1951 Rosenberg, Bernard L., 35 Tamarack Ave. 06810
1978 Rottenberg, Robert W., Danbury Hospital 06810
1977 Ruben, Richard S., 84 Locust Ave. 06810
1964 Rubin, L. Robert, 84 Locust Ave. 06810
1947 Ruiz, Rolando R., 77 West 06810
1975 Sanchez, Rogelio, 92 Locust Ave. 06810
1976 Saperstein, Stanley, Glen Hill Rd. 06810
1967 Saunders, Francis Peter, 85 Osborne 06810
1958 Schwartz, Raphael David, 92 Locust Ave. 06810
1973 Sellner, Henry Ascher, 84 Locust Ave. 06810
1965 Shafto, William Alan, 18 Fairview Ave. 06810
1970 Sherman, Warren T., Glen Hill Rd. 06810
1958 Silvert, David Sidney, 113B Deerhill Ave. 06812
1965 Simonelli, Joseph Michael, 2 Hospital Ave. 06810
1953 Sinton, William Anthony, 85 Osborne 06810
1958 Staffieri, Salvatore, 116 Main 06810
1978 Tietjen, Ronald, 85 Osborne 06810
1932 Tomaino, Felix Francis, 85 West 06810
1963 Tomaino, Pietro, 44 Davis 06810
1973 Townsend, Gary L., 16 Hospital Ave. 06810
1965 Upton, Emily Frances, 17 Jeanette Rd. 06812
1957 Van Syckle, Guy Weaver, 30 Hospital Ave. 06810
1972 Weiner, Jay, 92 Locust Ave., Danbury 06810
1975 Whitney, Alden E., 67 Long Ridge Rd. 06810
1978 Yoburn, Michael Myer, 70 West 06810
1970 Zimmer, Alan E., 95 Locust Ave. 06810
1971 Zolov, David Mitchell, 53 North 06810

DARIEN

1961 Allard, Gilles Guy, 20 Wilson Ridge Rd. 06820
1951 Brown, David Arthur, 210 Brookside Rd. 06820
1974 Brown, Spencer Franklin, P.O. Box 1073 06820
1973 Bull, Marcia B., Dew La. 06820
1964 Dorr, James Richard, 36 Old King's Hwy. South 06820
1951 Felder, Edward Arnold, Contentment Island Rd. 06820
1955 Gammill, James Flaude, 767 Post Rd. 06820
1960 Harness, John Henry, 2701 Boston Post Rd. 06820
1954 Hughes, George Stevenson, 10 Nickerson La. 06820
1953 Kavookjian, Haik, Jr., 62 Stanton Rd. 06823
1968 Krauthamer, Martin Joel, 17 Old King's Hwy. South 06820
1962 Kremer, Carl Peter, Jr., 8 Ring's End Rd. 06822
1955 Macgregor, James Verry, 2 Queens La. 06820
1954 McGarry, John Joseph, 36 Old King's Hwy. So. 06820
1977 Michaelson, Stephen P., 17 Old King's Hwy. So. 06820
1977 Negus, Philip E., 36 Old King's Hwy. South 06820
1956 Ralph, Fenn T., P.O. Box 1162 06820
1966 Schoenwald, Herman R., 298 Brookside Rd. 06820
1975 Skolnick, Stanley Richard, 17 Old King's Hwy. South 06820
1960 Squattrito, Umberto, 17 Old King's Hwy. South 06820
1977 Suchenski, Michael Nicholas, 106 Noroton Ave. 06820
1971 Tobin, John Joseph, 17 Old King's Hwy. South 06820
1977 Volkmer, Donald Durham, 767 Boston Post Rd. 06820
1976 Yap, Jesus F. Jr., 17 Old King's Hwy, South 06830

EAST NORWALK 06855

1975 Bernard, Marcelle Thomasine, Pine Hill Rd.
1958 Burke, Albert Vincent, 195 East Ave.
1938 Corridon, James Donald, 94 East Ave.
1954 Csovanyos, Laszlo, 200 East Ave.
1973 Dalal, Bharat Jayant, 108 East Ave.
1948 Ippolito, Thomas Leonard, Pine Hill Ave.

EASTON 06425

1977 Aleali, Syed H., 4 Wintergreen Dr.
1951 Chick, Forris Beecham, 171 Sport Hill Rd.
1974 Kim, Kwi Sook, Choi, 50 Ferndale Dr.
1974 Kim Yu Hong, Ferndale Rd.
1952 Ryan, James Edward, 750 Sport Hill Rd.
1935 Smith, Joseph Jacob, 394 Sport Hill Rd.

FAIRFIELD

1969 Abrams, Harold, 1305 Post Rd. 06430
1942 Apuzzo, Anthony Albert, 131 Toilsome Hill Rd. 06430
1944 Barker, Daniel C., 133 Reef Rd. 06430
1951 Baum, Seymour James, 1305 Post Rd. 06430
1939 Biehn, Donald M. Frick, 47 Parkway 06430
1963 Blum, Lawrence Michael, 1700 Post Rd. 06430
1970 Burd, Robert M., 1305 Post Rd. 06430
1975 Casey, Thomas Ray, 3135 Easton Tpke. 06431
1940 Castaldo, Louis F., 130 Old Oaks Rd. 06432
1967 Clift, George Vincent, 325 Reef Rd. 06430
1973 Cohen, Ivan S., 1305 Post Rd. 06430
1973 Cohen, William B., 1305 Post Rd. 06430
1969 Coolidge, Melvin P., 1305 Post Rd. 06430
1957 Cooper, Milton, 1305 Post Rd. 06430
1973 D'Apice, Joseph Patrick, 545 Mill Plain Rd. 06430
1957 D'Elia, Frank G., P.O. Box 207, 765 Post Rd. 06430
1921 DeWitt, Edward Nicholas, 3129 Burr 06432
1949 Edwards, Larry Edwin, 1410 Mill Plain Rd. 06430
1974 Feuer, Paul Michael, 1305 Post Rd. 06430
1957 Flom, Leonard, 1903 Post Rd. 06430
1938 Foley, Francis Xavier, 168 Algonquin Rd. 06432
1968 Gacso, William Julius, 1838 Black Rock Tpke. 06432
1953 Gaffney, Robert Edward, 325 Reef Rd. 06430
1959 Gardner, Charles Wesley, Jr., 100 Verna Hill Rd. 06431
1950 Gardner, Sidney M., 1995 Fairfield Beach Rd. 06430
1954 Garrell, Marvin, 60 Katona Dr. 06430
1968 Gaynes, Philip Martin, 1903 Post Rd. 06430
1971 Gill, Alan Jay, 1305 Post Rd. 06430
1977 Glasser, Jack David, 161 King's Highway 06430

1971 Grossman, Edward T., 1305 Post Rd. 06430
1968 Hankin, Edwin, 1305 Post Rd. 06430
1975 Hemenway, Charles Gerald, 60 Katona Dr. 06430
1972 Herbin, Joseph Thomas, 60 Katona Dr. 06430
1977 Hermele, Herbert Ira, 325 Reef Rd. 06430
1963 Higgins, Kenneth Elliot, 325 Reef Rd. 06430
1973 Hobbie, Robert J., 400 Stillson Rd. 06430
1959 Hoffman, William Albert, 1305 Post Rd. 06430
1957 Jonas, Gordon Quincy, 1700 Post Rd. 06430
1943 Jones, Elwood King, 20 Old Barn Rd. 06430
1947 Joslin, Stuart L., 1305 Post Rd. 06430
1958 Kamens, Edward A., 1305 Post Rd. 06430
1973 Katz, Stephen R., 1700 Post Rd. 06430
1978 Kelly, George Philip, 160 Fairfield Woods Rd.
1948 Kemp, Edward P., 178 Reef Rd. 06430
1948 Kenigsberg, Nathaniel, 55 Skytop Dr. 06432
1972 Kiss, George Thomas, 1240 Post Rd. 06430
1950 Klimas, Francis Alexander, P.O. Box 1172 06432
1957 Knauff, Edward Franklyn, P.O. Box 1172 06432
1924 Kneale, Halford Benson, 239 Toilsome Hill Rd. 06604
1972 Lee, Michael Alan, 1172 Post Rd. 06430
1973 Leighton, Robert Leslie, 261 Robin La. 06432
1955 Lenci, Thomas Dexter, General Electric Co., Med. Ctr. 06431
1977 Levinson, Stephen Ronald, 1305 Post Rd. 06430
1976 Levinson, Stuart Alan, 1305 Post Rd. 06430
1931 Lockhart, R. Harold, 37 Verna Field Rd. 06431
1975 Luchansky, Edward Moyher, 1700 Post Rd. 06430
1975 Machledt, John Hendrix, Jr., 325 Reef Rd. 06430
1949 Markley, Ludwig Louis, 402 Davis Rd. 06430
1959 Maxham, David Lincoln, 553 No. Benson Rd. 06430
1950 McCreery, Edward Prince, 325 Reef Rd. 06430
1949 Messinger, Henry J., 1597 Post Rd. 06430
1973 Molloy, Edward Michael, 1735 Post Rd. 06430
1945 Morgan, Kenneth Remsen, 325 Reef Rd. 06430
1971 Morrison, Murray Allan, 325 Reef Rd. 06430
1973 Moses, John Austin, 30 Kalan Circle 06430
1954 Moss, Albert Murray, 38 Meadow Court Dr. 06604
1953 Nevins, Robert Allan, 325 Reef Rd. 06430
1974 O'Rourke, George Ward, 1838 Black Rock Tpke. 06430
1962 Pearlstone, Arnold David, 1903 Post Rd. 06430
1977 Pinto, Edward R., 325 Reef Rd. 06430
1977 Plunkett, E.R., General Electric Co. 06431
1975 Pocock, Herman Deidler Jr., 3135 Easton Tpke. 06431
1976 Ray, Michael E., 1305 Post Rd. 06430
1957 Rhame, Harold Ellis, Jr., 325 Reef Rd. 06430
1938 Ribner, Harold, 365 Toilsome Hill Rd. 06430
1959 Rogowski, John Peter, 137 Whiting Pond Rd. 06432
1978 Rosenman, Stephen David, 1305 Post Rd. 06430
1975 Sacks, Kenneth L., 1305 Post Rd. 06430
1978 Sarwar, A.S. Hasan, 1838 Black Rock Tpke. 06430
1957 Sires, William Oscar, 1506 Post Rd. 06430
1952 Smolen, Elwyn Milton, 1960 Bronson Rd. 06430
1973 Smolen, Ruth L., 1960 Bronson Rd. 06430
1951 Spencer, Samuel, 190 Curtis Ter. 06430
1965 Stathacos, Eustace James, 1951 Congress 06432
1977 Staub, Edward M., 325 Reef Rd. 06430
1975 Stephenson, James H., 1078 Sasco Hill Rd. 06430
1953 Stubenhaus, Jay H., 23 Sherman 06430
1975 Tan, Jose Manuel, 325 Reef Rd. 06430
1974 Tidhar, Itschak, 325 Reef Rd. 06430
1971 Twersky, Joshua Moses, 400 Stillson Rd. 06430
1964 Van de Berghe, Richard L., 325 Reef Rd. 06430
1967 Waynik, Cyril, 60 Katona Dr. 06430
1967 Weicholz, Sheldon, 675 Fairfield Woods Rd. 06432
1969 Weitzman, Hervey A., 60 Katona Dr. 06430
1977 Weston, Roy Bertrand, P.O. Box 1172 06430
1954 Williams, Charles Rockwell, 325 Reef Rd. 06430
1968 Woods, Charles Alexander, 400 Stillson Rd. 06430
1976 Zigun, Charles, 400 Post Rd. 06430

NEW FAIRFIELD 06810

1969 Reitwiesner, Andrew George, P.O. Box 8144, Lake Dr., North
1975 Rostenberg, Peter Orris, Candlewood Corners

GLENBROOK 06906

1964 Nadel, Hyman, 397 Courtland Ave.

GREENWICH

1975 Alexander, Gail Susan, Stanwich Rd. 06832
1977 Alexander, Martin M., 20 Dayton Ave. 06830
1955 Arturi, Peter Adolph, 71 Old Church Rd. 06830
1969 Bachner, Paul, Greenwich Hospital 06830
1974 Banyard, Richard David, 4 Dearfield Dr. 06832
1949 Beaty, John Thurston, 49 Lake Ave. 06830
1954 Beck, Edith Marie, 56 Lafayette Pl. 06830
1963 Benninghoff, Daniel William, Greenwich Hospital 06830
1972 Bernene, James Louis, Greenwich Hospital 06830
1957 Bisceglia, Joseph Gregory, 49 Lake Ave. 06830
1949 Blossom, Dudley Buck, Pheasant Lane 06833
1968 Bogdan, Peter E., 49 Lake Ave. 06830
1948 Bolton, John Dewey, 49 Lake Ave. 06830
1976 Bonheim, Nelson Alfred, 1 Perryridge Rd. 06830
1950 Bonnett, Dovell Nicholas, 20 Dayton Ave. 06830
1975 Borges, James S., 49 Lake Ave. 06830
1965 Branom, Wayne Thurman, Jr., 49 Lake Ave. 06830
1966 Camp, Walter Atwood, 49 Lake Ave. 06830
1969 Campbell, Milton Flake, Dearfield Dr. 06832
1975 Catlin, Brian, 4 Dearfield Dr. 06830
1976 Chiang, Han Twu, Greenwich Hospital 06830
1952 Christie, Frederick John, Greenwich Hospital 06830
1976 Clark, John Leo, Greenwich Hospital Assoc. 06830
1975 Cole, Raymond Melvin, 49 Lake Ave. 06830
1977 Conboy, Kevin Edward, 49 Lake Ave. 06830
1974 Coomaraswamy, Rama P., 4 Dearfield Dr. 06832
1970 Crisafi, Bartel Robert, 49 Lake Ave. 06830
1973 Danehower, Richard Lloyd, 49 Lake Ave. 06830
1944 Davol, Rector Thompson, 49 Lake Ave. 06830
1950 Dean, Peter Michael, 49 Lake Ave. 06830
1952 Delany, Forbes, 4 Dearfield Dr. 06832
1947 Derkash, Stephen L., Rockwood Lane Spur 06830
1959 Doering, Eckart George, 4 Dearfield Dr. 06832
1977 Ewell, Murlin K., 523 Putnam Ave., 06830
1975 Finlay, John Robert, 49 Lake Ave. 06830
1951 Finn, Frederick Wall, 4 Dearfield Dr. 06832
1975 Fisher, Milton, Putnam-Weaver Nursing Home 06830
1978 Fodor, Peter Bela, 40 West Elm 06830
1948 Fogel, David Hudson 60 Putnam Park 06830
1973 Frank, Ross Delano, 3 Glen Ct. 06830
1972 Gallo, Gary Anthony, 20 Dayton Ave. 06830
1952 Gerster, John Wynne, 4 Dearfield Ave. 06830
1974 Griffin, William M., 49 Lake Ave. 06830
1961 Hampton, William Hately, 38 Lake Ave. 06830
1973 Hardy, Robert E., 42 Sherwood Pl. 06830
1968 Haskins, Donald Miller, General Reinsurance Life Corp. 06830
1977 Hawkins, Cheryl V., Greenwich Hospital 06830
1960 Hecklau, Edmund Frederick, 42 Sherwood Pl. 06830
1963 Hillis, William, 4 Dearfield Dr. 06832
1950 Hoffman, J. Brooks, Perryridge Rd. 06830
1949 Howorth, Beckett, 4 Dearfield Dr. 06832
1977 Huckabee, William Edward, 2 Greenwich Plaza 06830
1965 Innes, James Walker, 1 Perryridge Rd. 06830
1971 Kauer, George L. Jr., American Lane 06830
1959 Keller, Norman Wolf, 49 Lake Ave. 06830
1949 Kent, Edwin Head, 58 North 06830
1972 Kopeloff, Nicholas, 4 Dearfield Dr. 06830
1977 Krieger, Paul David, 1 Perryridge Rd. 06830
1953 Langan, Michael Joseph, 4 Dearfield Dr. 06832
1964 Larkin, John I., 42 Sherwood Pl. 06830
1950 Lee, John Frederick, 116 Birch Lane, 06830

1976 Lichtenstein, Eric Stefan, 38 Lake Ave. 06830
1969 Lightbody, Forrest E. H. Greenwich Hospital Association 06830
1972 Maher, Peter Harvey, 56 Lafayette Pl. 06830
1974 Marcus, Henriette, Hunting Ridge Rd. 06830
1973 Marino, A. Michael, Greenwich Hospital 06830
1950 Markley, Henry Eugene, 49 Lake Ave. 06830
1976 McCalley, Stuart Wesley, 49 Lake Ave. 06830
1953 McKendree, Charles G., Greenwich Hospital Association 06830
1974 Mickley, Diane Wilkins, 239 Glenville Rd. 06830
1974 Mickley, Steven Phillips, 239 Glenville Rd. 06830
1954 Millard, Donald Henry, 4 Dearfield Dr. 06832
1975 Missier, Peter Alexander, 4 Dearfield Dr. 06830
1959 Montimurro, Joseph Anthony, 49 Lake Ave. 06830
1962 Morley, David Clark, 6 Meadow Dr. 06830
1971 Murphy, Joseph M., Greenwich Hospital Association 06830
1948 Murray, John Gregg, Greenwich Hospital 06830
1970 Newberg, Marc E., 49 Lake Ave. 06830
1972 Newman, Robert David, Greenwich Hospital 06830
1971 Nicholl, Robert G., 221 Milbank Ave. 06830
1955 Nolan, Timothy Francis, 49 Lake Ave. 06830
1973 Orphanos, James Peter, 23 Maple Ave. 06830
1962 Patterson, Marjorie Butts, 4 Dearfield Dr. 06832
1961 Prangley, Arthur George, Jr., 4 Dearfield Dr. 06832
1964 Prunier, John Henry, 49 Lake Ave. 06830
1973 Rapoport, Alan M., 49 Lake Ave. 06830
1972 Reber, Robert Eugene, 101-1 Lewis 06830
1968 Redmond, Anthony Pierce, 49 Lake Ave. 06830
1968 Rodda, Thomas Douglas, 49 Lake Ave. 06830
1966 Rosenberg, Arthur H., 42 Sherwood Pl. 06830
1946 Rourke, Thomas Alfred, 88 Milbank Ave. 06830
1968 Salerno, Silvio Aniello, Greenwich Hospital 06830
1953 Schwimmer, Robert Rowland, 49 Lake Ave. 06830
1975 Seamonds, Perry, 191 Overlook Dr. 06830
1938 Serrell, Howard P., Round Hill Rd. 06833
1973 Shanahan, Sheila Ann, 42 Sherwood Pl. 06830
1976 Shaw, Katherine Alcid, Greenwich Hospital Assoc. 06830
1970 Spencer, James Alexander Erskine, Greenwich Hospital 06830
1940 Swarts, William B., Warwick Towers 06830
1939 Tunick, George L., 675 Steamboat Rd. 06830
1972 Ubogy, George A., 4 Dearfield Dr. 06830
1958 von Gal, Herbert Vreeland, 4 Dearfield Dr. 06832
1976 Walsh, Francis Xavier, 42 Sherwood Pl. 06830
1942 Weber, Frederick Clarence, Jr., 185 Putnam Park 06830
1953 Wheeler, Robert Channing, Greenwich Hospital 06830
1955 Wilsey, John Colver, 4 Dearfield Dr. 06832
1973 Wilson, James Ronald, Jr., 2 Glenville Rd. 06830
1974 Wolanske, Stephen D., 4 Dearfield Dr. 06830
1969 Wood, James William, 1 Perryridge Rd. 06830
1968 Worcester, James N. Jr., 20 Dayton Ave. 06830
1949 Wyatt, Robert Harry, 1 Perryridge Rd. 06830
1973 Yerg, Raymond A., American Can Co. 06830
1976 Zales, Michael Robert, Edgewood Dr. 06830

HUNTINGTON 06484

1967 Feierstein, Saul, 43 Huntington Pl.
1975 Mizak, Daniel Joseph, 30 Huntington

MONROE 06468

1961 Garrity, James David, Elm
1969 Light, Claude F., 494 Main

NEW CANAAN 06840

1937 Abrahams, Meyer, 1 Colonial Court
1964 Benton, Arnold Jerome, Silver Hill Foundation
1942 Bradley, E. Tremain, 78 Talmadge Hill Rd.
1952 Brown, Charlotte Rush, Valley Rd.
1951 Brown, David Seeley, 173 East Ave.
1965 Chachkes, Jacob Trister, 194 South Ave.
1941 Cody, Thomas Patrick, 241 Main
1956 Crary, Horace Ingraham, 173 East Ave.
1954 Crown, Charles Augustus, 194 South Ave.
1960 Eckhardt, William Francis, Jr., 173 East Ave.
1965 Flynn, Thomas Garrett, 138 East
1941 Hebard, George Whiting, Box 758
1945 Hiden, Robert Battaile, P.O. Box 265
1975 Humphries, Robert Hunter, Silver Hill Foundation
1972 Katis, James George, Silver Hill Foundation
1971 Moore, Morgan Francis, 303 Elm
1978 Nelson, William Henson, Silver Hill Foundation
1952 Pullen, Edward Markey, 242 Wahackme Rd.
1949 Rem, Edward A., 73 Comstock Hill Rd.
1958 Rutherford, James Woodson, 162 East Ave.
1975 Scavetta, Joseph Francis, Silver Hill Foundation
1973 Schuster, Carlotta Lief, Silver Hill Foundation
1967 Shutkin, Peter Michael, 173 East Ave.
1974 Slater, James A., 173 East Ave.
1975 Stubblefield, Robert Lee, Box 1177, 208 Valley Rd.
1935 Terhune, William Barclay, 252 Valley Rd.
1947 Wright, Harold S., Silver Hill Foundation

NEWTOWN 06470

1972 Annunziata, Vincent, R.D. No. 3, 6 Patricia La.
1973 Bauta, Humberto Pedro, Danbury-Newtown Rd.
1968 Borrelli, Anthony Paul, Danbury-Newtown Rd.
1976 Brown, Lionel Graham, Danbury-Newtown Rd.
1970 Craven, Raymond Orvin, Danbury-Newtown Rd.
1962 Draper, Thomas F., Deep Brook Rd.
1970 Evans, Donald Thomas, Danbury-Newtown Rd.
1975 Gretsch, Barbara Jean, 44 Castle Hill Rd.
1960 Grossman, Robert S., P.O. Box 426
1970 Kotch, Philip Irwin, P.O. Box 426
1974 Margules, Richard M., P.O. Box 426
1966 Meehan, Bernard Joseph, Danbury-Newtown Rd.
1977 Meyerson, Steven Jay, Danbury-Newtown Rd.
1965 Miller, Robert Bernhardt, Fairfield Hills Hospital
1962 Petruschow, Anatol, Fairfield Hills Hospital
1959 Rhinehart, John Woodward, 46 West
1977 Sonido, Romeo Avena, Fairfield Hills Hospital, Box W
1968 Thomas, Douglas Wyndham, P.O. Box 192

NOROTON 06820

1942 Robison, Roy Calvin, Box 3056

NORWALK

1972 Ahmed, Ezzeldin H. S. 114 East Ave. 06851
1941 Aiello, Louis James, 394 West Ave. 06850
1950 Allen, Benjamin Israel, 13 Park 06851
1975 Andrews, Joseph Francis, Jr., 153 East Ave. 06851
1975 Atlas, Ernest, 83 East Ave. 06851
1969 Auerbach, Neil, 149 East Ave. 06851
1977 Barbieri, J. John, 108 East Ave. 06851
1963 Barton, Jerome, 10 Mott Ave. 06850
1975 Bernard, Marcelle Thomasine, 156 East Ave. 06851
1974 Biondi, Robert Michael, 149-153 East Ave. 06851
1964 Brovender, Arthur, 10 River 06850
1973 Chan, Daniel W., 108 East Ave. 06851
1973 Chapnick, Girard A., 166 East Ave. 06851
1975 Chess, Jeremy, 153 East Ave. 06851
1977 Chi, Tao-Nan, 166 East Ave. 06851
1965 Corey, Joseph Michael, 53 East Ave. 06851
1945 Corwin, Daniel Bernard, 49 East Ave. 06851
1952 Corwin, Henry Richard, 13 Park 06851
1975 Coscia, Anthony Gaetano, 83 East Ave. 06851
1965 Cronin, William Timothy, 395 West Ave. 06850
1958 Dearani, Abraham Charles, 195 East Ave. 06851
1937 Diamond, Edward H., 71 East Ave. 06851
1959 DiCorato, Frank, 10 Mott Ave. 06850
1954 Dwyer, Gregory Kennedy, 5 Elmcrest Ter. 06850

1978 Elias, Jorge J., 17 Monroe 06854
1966 Fabrizio, Tuula I. J., 42 Stevens 06850
1953 Falsone, Jack Joseph, 147 East Ave. 06851
1974 Feller, Clifford Warren, 149 East Ave. 06851
1975 Fenster, Michael, 10 Mott Ave. 06850
1963 Floch, Martin Herbert, 24 Stevens 06856
1951 Flynn, Edward John, 10 Mott Ave. 06850
1976 Fuchs, H. Martin, 124 East Ave. 06851
1975 Gaynor, Edward B., 153 East Ave. 06851
1946 Gens, John Paul, 153 East Ave. 06851
1947 Genvert, Harold, 5 Elmcrest Ter. 06850
1963 Georgakis, Nicholas, 71 East Ave. 06851
and 890 Ethan Allen Highway, Ridgefield 06877
1974 George, Robert Carr, 10 Mott Ave. 06850
1955 Giardina, David Diego, Norwalk Hospital 06856
1949 Gloetzner, Henry James, 71 East Ave. 06851
1959 Goodman, Stanley Erwin, 160 East Ave. 06851
1938 Gorham, Grace Viola, 64 Wall 06850
1955 Griffith, James Joseph, 83 East Ave. 06851
1963 Grossman, Bertram Howard, 153 East Ave. 06851
1974 Hedley, Gerald E., 153 East Ave. 06851
1959 Herman, Eugene B., 520 West Ave. 06850
1968 Hermann, Jens H., 124 East Ave. 06851
1977 Huskins, Dennis G., 83 East Ave. 06851
1975 Iacovino, John Ralph, 15 Stevens 06850
1973 Jee, Kwang Soo, Fullmar La. 06850
1976 Jerrett, Steven A., 85 East Ave. 06851
1945 Johnson, William Henry Nelson, 7 Park 06851
1951 Jones, Martling Barnet, 197 East Ave. 06855
1977 Kahan, Ronald Steven, 10 Mott Ave. 06850
1949 Kalaman, Francis J., P.O. Box 629 06851
1973 Kaye, Roger Henry, 5 Elmcrest Ter. 06850
1966 Klein, Jerome Joshua, 83 East 06851
1970 Kramer, Theodore, 10 Mott Ave. 06850
1976 Larson, John Alfred, 126 East Ave. 06851
1977 Lefkowitz, Lawrence A., 153 East Ave. 06851
1970 Levine, Robert Arthur, 85 East Ave. 06851
1977 Lisi, Richard Joseph, 395 West Ave. 06850
1970 Littman, Edward, 83 East Ave. 06851
1974 Lo, Chun Bun, 108 East Ave. 06851
1953 Lovekin, Louise Gout, 10 Mott Ave. 06850
1949 Lyons, Benjamin Ephraim, 10 Mott Ave. 06850
1968 Maloney, Paul Keating, Jr., 12 Elmcrest Ter. 06850
1977 Mandell, Marshall, 3 Brush 06850
1952 Marinucci, Edmund Dominic, 156 East Ave. 06851
1978 Markey, Paul Anthony, 10 Mott Ave. 06850
1964 McCaul, Kevin Francis, 10 Mott Ave. 06850
1975 McNamara,John Raymond, 10 Mott Ave. 06850
1962 Mendoza, Ruben, 15 Belden Ave. 06850
1963 Meno, George Peter, 108 East Ave. 06851
1965 Merdinolu, Murat Arthur, 152 East Ave. 06851
1946 Mills, Clifford Wheeler, 65 East Ave. 06851
1951 Minor, James Vincent, Jr., 10 Mott Ave. 06850
1961 Minot, Henry Davis, 5 Elmcrest Ter. 06850
1951 Mulford, Edwin H., II, 5 Elmcrest Ter. 06850
1960 Nair, Sreedhar, Carriage Dr. 06850
1951 Norrington, Eric George, 153 East Ave. 06851
and 1 Avery Pl., Westport 06880
1973 Novack, Stuart Neil, 83 East Ave. 06851
1960 Orlins, Melvin David, Studio Lane 06850
1970 Orr, Harry Dawson, Jr., 35 Hawthorne Dr. 06851
1975 Pang, Sau, Chu, Appletree La. 06850
1975 Papowitz, A. Joel, 83 East Ave. 06851
1977 Patterson, George Allan, 1 Westport Ave. 06850
1963 Piro, John Frank, 53 East Ave. 06851
1973 Pool, John L., 166 East Ave. 06851
1977 Provato, Frank Leonard, 2 Park 06851
1949 Richman, Daniel Powell, 111 East Ave. 06851
1955 Rogers, William Joseph, 10 Mott Ave. 06850
1963 Sacco, John Joseph, 85 East Ave. 06851
1974 Sallick, Richard Marshall, Norwalk Hospital 06856
1974 Samai, Hossein, 108 East Ave. 06851
1966 Schulman, Paul L., 83 East Ave. 06851
1972 Schwartz, Paul Edward, 83 East Ave. 06851
1947 Serena, Frank A., 158 East Ave. 06851
1946 Serena, John Mario, 108 East Ave. 06851
1975 Shah, Suvarna M., 50 Washington St. 06854
1976 Shield, Dennis Edward, 12 Elmcrest Ter. 06850
1931 Simon, Louis G., 212 New Canaan Ave. 06850
1968 Singer, Bernard, 104 East Ave. 06851
1950 Skluth, L. Herbert, 87 East Ave. 06851
1963 Stabinsky, Charles, 152 East Ave. 06851
1943 Steinberger, Laszlo, 166 East Ave. 06851
1974 Stember, Rishon H., 111 East Ave. 06851
1975 Stovell, Peter Buckner, 124 East Ave. 06851
1962 Sullivan, William Michael, 83 East Ave. 06851
1965 Tager, Michael George, 12 Elmcrest Ter. 06850
1966 Tracey, Edward J., 124 East Ave. 06851
1971 Tracey, James Patrick, 124 East Ave. 06851
1952 Trambert, Harry L., 150 East Ave. 06851
1968 Truax, Hollis Norman, Norwalk Hospital 06856
1953 Vetter, Ignatius Joseph, 5 Elmcrest Ter. 06850
1971 Vigna, Vincenzo, 108 East Ave. 06851
1958 Walker, Harold Clifford, 10 Mott Ave. 06850
1975 Weinberger, Norman J., 149 East Ave. 06851
1971 Weinstein, Arnold H., 10 Mott Ave. 06850
1938 Weinstein, Nathan, 108 East Ave. 06851
1975 Weinstein, Stephen Louis, 104 East Ave. 06851
1958 Wexler, Richard, 166 East Ave. 06851
1977 Wiener, Paul B., 83 East Ave. 06851
1968 Williams, Shirley Yvonne, Norwalk Hospital 06856
1971 Zusman, Howard Eugene, Norwalk Hospital 06856

OLD GREENWICH 06870

1939 Anderson, Clifton Winthrop, P.O. Box 37
1973 Blumberg, Joel Myron, 8 West End Ave.
1950 Brock, Warren Heath, 311 Sound Beach Ave.
1967 Gray, Charles Helman, 4 Cove Ridge Lane
1974 Kitchen, Robert Nelson, 8 West End Ave.
1972 Lewis, Stephen H., 8 West End Ave.
1973 Nemec, Jutta Magnus, 9 Meadow Pl.
1976 Poutas, John J., 46 North Ridge Rd.
1948 Raffaele, Frank Joseph, 296 Sound Beach Ave.
1973 Rein, Joel M., 8 West End Ave.
1959 Schmitt, Daniel, 8 West End Ave.
1963 Siefert, Frederick Edward, 8 West End Ave.

RIDGEFIELD 06877

1975 Boorer, Rebecca T., 31 Scott Ridge Rd.
1975 Brook, Joel Eugene, 38 Grove
1967 Buchman, Joseph Gilbert, 38 Grove
1974 Chambers, C. Frank, P.O. Box 635
1975 Cohen, George Allan, 890 Ethan Allen Highway
1975 Elisofon, Robert M., 38 Grove
1977 Garbus, Stanley Bernard, 102 Stonecrest Rd.
1966 Guigui, Armand, 900 Ethan Allen Highway
1975 Guigui, Christine B., 484 Main
1972 Katis, Lauma U., 162 Old West Mountain Rd.
1977 Leong, May L.Y., 38 Grove
1976 Monroe, Jeffrey Bruce, 31 Bryon Ave.
1977 Neligan, Patrick, 38 Grove
1977 Russow, Erich H., 38 Grove
1977 Ruxin, Robert Lloyd, 38 Grove
1951 Safford, Theodore, Jr., 69 Main
1962 Sheehan, James Ennis, 484 Main
1975 Zelson, Carl, 71 Bennetts Farm Rd.

RIVERSIDE 06878

1975 Caragol, William John, 96 Club Rd.
1967 Kelly, J. Colman, 30 Bonwit Rd.
1939 Read, Francis Arnold, 10 Crescent Rd.
1978 Savyckyj, Jurij, 36 Bramble Lane

ROWAYTON 06853

1942 DeKlyn, Ward B., Nylked Terr.

1938 Hunkemeier, Edna, 1 Nylked Ter., Pine Point
1948 Levine, Abraham I., 26 Wilson Ave.
1956 Rose, Gilbert Jacob, 25 Sammis

SANDY HOOK 06482

1976 Wachsman, Harvey Frederick, Great Quarter Rd.

SHELTON 06484

1941 Pagliaro, Joseph John, 405 Coram Ave.

SOUTH NORWALK 06854

1946 Burack, Jason Oliver, 20 North Main

SOUTHPORT 06490

1935 Antell, Maxwell Joseph, 64 Southport Woods Dr.
1939 Hardenbergh, Daniel Bailey, 101 Harbor Rd.
1944 Harris, H. Patterson, Jr., 83 Mill Hill Lane.
1949 Kueffner, William Robert, 99 Harbor Rd.
1961 Scholan, Francis James, 99 Harbor Rd.
1947 Sterrett, Raymond A., 115 Main

SPRINGDALE 06879

1949 Savak, Joseph Ernest, 743 Hope

STAMFORD

1946 Abrahamson, Robert Henry, High Valley Way 06903
1976 Ali, Azhar Asghar, 55 Forest 06902
1956 Banfield, Richard Sterling, Jr., 144 Morgan 06905
1936 Bannon, Frederick Michael, 691 Westover Rd. 06902
1975 Baron, Bruce Robert, 583 High Ridge Rd. 06905
1954 Bellwin, Alexander, 144 Morgan 06905
1968 Benjamin, Burton Irving, 19 Third 06902
1976 Benjamin, Jeffrey Lloyd, 47 Oak 06905
1954 Benjamin, Martin Robert, 1425 Bedford 06905
1965 Bessa, Octavio, Jr., 1380 Bedford 06905
1974 Blabey, Robert Groesbeck, Jr., 70 Mill River 06902
1974 Blass, Jolan Wirth, 173 Hubbard Ave. 06905
1973 Bockar, Joyce A., 52 Briarwood La. 06903
1976 Bond, Oliver Bowes, 44 Strawberry Hill Ave. 06902
1957 Borowy, John Edward, 1380 Bedford 06905
1974 Bottiglieri, Nicholas G., 965 Hope 06907
1971 Braun, Ronald Walter, 133 MacGregor Dr. 06902
1954 Breakell, Edward Samuel, Stamford Hospital 06902
1967 Browne, Francis Joseph, 1425 Bedford 06905
1961 Browne, Michael Alexander, 1425 Bedford 06905
1961 Browning, Louis D. Jr., 83 Morgan 06905
1971 Bujdud, Christian M., 192 Barclay Dr. 06903
1969 Bull, Sherman Marsh, 70 Mill River 06902
1951 Bullen, Halsey Graves, 21 Broad 06901
1969 Bullwinkel, George Albert, Jr., 70 Mill River 06902
1973 Carino, John Maurice, 47 Oak 06905
1944 Cassone, Rocco, 1010 Washington Blvd. 06901
1966 Chamberlin, Allen Chapin, 144 Prospect 06901
1950 Cloonan, John Joseph, 95 Morgan 06905
1946 Colburn, Russell Fitch, 1416 Bedford 06905
1954 Coleman, Monroe, 144 Morgan 06905
1940 Connolly, Joseph Patrick, 193 Davenport Dr. 06902
1978 Connors, Richard Charles, 76 Glenbrook Rd. 06902
1974 Cook, Colin Burford, 297 High Ridge Rd. 06905
1969 Cottle, Robert D., 125 Strawberry Hill Ave. 06902
1961 Coughlin, Francis Raymond, Jr., 144 Morgan 06905
1940 Crane, James Everett, 965 Hope 06907
1975 Dalgin, Paul Henry, 1100 Bedford 06905
1962 Danoff, Stuart Jay, 1867 Summer 06905
1973 Deutchman, Ralph Floyd, 47 Oak 06905
1968 Dombrowski, Edwin Henry, 95 Morgan 06905
1976 D'Onofrio, Gregory Richard, Jr., 21 Broad 06901
1973 Dreyer, Neil Paul, 19 Third 06902
1976 Dubissette, Michael E., 115 West Main 06902
1968 Echentl, Arthur A., 122 Hoyt 06905
1973 Elder, William John, Cologne Life Reinsurance Co. P.O. Box 300 06904
1956 Eliasoph, James Lee, 70 Mill River 06902
1955 Eng, Gunnar Orville, 83 Morgan 06905
1977 Engel, Murray, 50 Glenbrook Rd. 06902
1959 Erdelyi, Paul Gedeon, 132 Hope 06906
1973 Erichson, Robert B., 140 Hoyt 06905
1952 Fakkel, Marie Josephine, 100 Hoyt 06905
1954 Farrell, Jean Elizabeth, 1425 Bedford 06905
1950 Farrell, Richard Francis, 35 Hoyt 06905
1976 Feuer, Charles R., 112 Hoyt 06905
1933 Fincke, C. Louis, 21 Broad 06901
1937 Fine, Barnet, 70 Grove 06902
1962 Fisher, Lloyd Chaim, 31 Strawberry Hill Ave. 06902
1975 Fitzgerald, Terence Sean, 500 Newfield Ave. 06905
1971 Fleming, Richard Joseph, Shelburne & W. Broad 06902
1958 Fogelman, Henry, 69 Forest 06902
1976 Forman, Mel Alan, 122 Hoyt 06905
1969 Fox, Martin, 1435 Bedford 06905
1974 Friedman, Michael Arnold, 144 Morgan 06905
1931 Gandy, R. Alfred, East La. 06905
1953 Geer, Enos Throop, 144 Morgan 06905
1974 Gefter, William Irvin, St. Joseph's Hospital 06904
1931 Giles, Newell Walton, 1 Atlantic 06901
1977 Gilligan, Robert, 120 Long Ridge Rd. 06904
1964 Gofstein, Ralph M., 235 Den Rd. 06903
1953 Golbey, Robert Bruce, 1424 High Ridge Rd. 06903
1974 Gold, Leonard, 1425 Bedford 06905
1974 Goldberg, Paul Aaron, 125 Strawberry Hill Ave. 06902
1954 Goldfarb, Jerry, 19 Third 06902
1949 Goldfarb, Simon L., 1435 Bedford 06902
1965 Goodhue, Peter Ames, 70 Mill River 06902
1976 Gordon, Gilbert Lee, 2 Landmark Sq. 06921
1976 Gorun, George, 144 Prospect 06901
1968 Grann, Victor Robert, 140 Hoyt 06905
1970 Gray, Parke Hanswood, 70 Mill River 06902
1962 Gromults, Joseph Michael, Jr., 125 Strawberry Hill Ave. 06902
1947 Haine, John W., 83 Morgan 06905
1975 Hanson, Ervin Eugene, 27 Bridge 06905
1977 Harris, Henry Lewis, 125 Strawberry Hill Ave. 06902
1955 Harrison, Arthr M., 1100 Bedford 06905
1972 Hecht, Harvey Leon, Stamford Hospital 06902
1977 Hughes, Peter William, 1425 Bedford 06905
1955 Izzo, Patrick Anthony, 21 Broad 06901
1944 Jaiven, Saul Joseph, 21 Bridge 06905
1956 Kanter, Donald Morton, 31 Strawberry Hill Ave. 06902
1965 Karas, Lewis Maxwell, 19 Third 06902
1956 Kardos, Joseph Anthony, 860 Stillwater Rd. 06902
1978 Kazarian, Kirk Krikor, Stamford Hospital 06902
1955 Keller, Louis, 554 Bedford 06902
1951 Kemp, Walter Wyckoff, 21 Broad 06901
1976 Kim, Peter, 750 Summer 06905
1957 King, Stewart Alan, 70 Mill River 06902
1947 Klein, Harold T., 33 Forest 06902
1969 Klein, Neil Charles, 31 Strawberry Hill Ave. 06902
1976 Klenoff, Bruce Howard, 100 Hoyt 06905
1939 Koffler, Arthur, 39 Glenbrook Rd. 06902
1970 Krasnogor, Lester Jay, Stamford Hospital 06902
1959 Kraut, Herbert Leon, 47 Oak 06905
1952 LaCorte, Salvatore, 90 Wyndover La. 06902
1965 LaForte, Peter, 70 Mill River 06902
1977 Landesman, Richard H., 26 Strawberry Hill Ave. 06902
1973 Lebowitz, Alan I., 31 Strawberry Hill Ave. 06902
1978 Lefkowitz, Martin, 970 Summer 06905
1951 Levine, Harry Philip, 828 High Ridge Rd. 06905
1951 Levine, Julian, 23 Hoyt 06905
1975 Lovegrove, Robert Harry, 35 Hoyt 06905
1968 Lundberg, Einar Albin, 1937 West Main 06904
1961 Madison, Robert Louis, 27 Strawberry Hill Ave. 06902
1953 Magida, Melville Gerson, 31 Strawberry Hill Ave. 06902
1934 Malloy, Edward Francis, 90 Hubbard Ave. 06905
1948 Mancinelli, M. Joseph, 102 West Lane 06905

1968 Manimbo, Sergio G., 82 Erickson Dr. 06903
1946 Mastrangelo, Angelo, Jr., 19 Grandview Ave. 06905
1948 McIntyre, Frederick Powers, 23 Hoyt 06905
1968 McKee, David Rice, 144 Morgan 06905
1953 McNerney, John Cornelius, 111 Four Brooks Dr. 06903
1975 McSweeney, James Joseph, 128 Strawberry Hill Ave. 06904
1947 Meacham, Charles Thomas, 1911 Summer 06905
1946 Miller, Hugh Kennedy, 70 Mill River 06902
1955 Morgan, Laura Grey, 21 Bridge 06905
1949 Moriarty, James Patrick, 23 Hoyt 06905
1970 Mostel, Arthur P., 27 Strawberry Hill Ave. 06902
1949 Moulyn, Adrian C., 63 Palmer's Hill Rd. 06902
1947 Mulaire, Victor J., 1010 Washington Blvd. 06902
1970 Nagle, John A., 23 Hoyt 06905
1940 Nemoitin, Bernard Oscar, 96 Main 06901
1977 Ney, Charles, 56 Lynam Rd. 06903
1973 Niell, Jose Pedro, 25 Third 06902
1952 Nolan, John Joseph, 95 Morgan 06905
1975 O'Connell, Richard Lee, 120 Long Ridge Rd. 06902
1946 Ogilvie, John Black, 95 Morgan 06905
1962 Orth, Robert Heyde, 47 Oak 06905
1957 Ostriker, Marilyn, 144 Morgan 06905
1955 Ostriker, Paul J., 144 Morgan 06905
1970 Ozcomert, Sedat, 555 Newfield Ave. 06905
1976 Parry, Michael Frank, 190 W. Broad 06902
1963 Pesiri, Ralph Anthony, 1729 Bedford 06905
1978 Plansky, Robert Leslie, 1100 Bedford 06905
1946 Poczabut, John Stephen, 23 Hoyt 06905
1977 Potkewitz, Irwin, 923 Sunset Rd. 06903
1970 Prokop, James Donald, 83 Morgan 06905
1969 Rainville, Thomas Joseph, 1867 Summer 06905
1938 Rawls, Cotton, 300 Main 06901
1969 Resnick, Jerome S., 50 Glenbrook Rd. 06902
1975 Rha, Chan-Kook, 95 Morgan 06905
1954 Richar, Walter John, 22 Beach View Dr. 06902
1960 Ridgway, Walter Stevens, 70 Mill River 06902
1975 Rini, James Martin, 128 Strawberry Hill Ave. 06904
1974 Robin, Noel Ira, Stamford Hospital 06902
1951 Rogers, James Forbes, 70 Mill River 06902
1966 Rogers, Martin C., 28 Haviland Rd. 06903
1977 Romanowitz, Harry Solomon, 125 Strawberry Hill Ave. 06902
1953 Rosenberg, Charles H., 810 Bedford 06905
1975 Rubinstein, Henry Maxwell, 44 Strawberry Hill Ave. 06902
1951 Ryan, John Joseph, 172 North 06902
1951 Ryan, William Arthur, 1729 Bedford 06905
1976 Salib, Fikry Boulos, 750 Summer 06902
1962 Santagata, Pasquale William, 78 West Hill Circle 06902
1964 Sava, Gerard Anthony, 70 Mill River 06902
1957 Savitsky, Elias, 47 Oak 06905
1970 Schwartz, Arnold Jay, Stamford Radiological Assoc., P.O. Box 1029 06904
1949 Sheard, Charles, 76 Glenbrook Rd. 06902
1973 Sheftell, Fred D., 500 Newfield Ave. 06905
1969 Sherrington, Harold Jaime, 555 Newfield Ave. 06905
1960 Siderides, Cleo I., Stamford Hospital 06902
1958 Siderides, Lambros E., 1100 Bedford 06905
1950 Slater, Gertrude, 1675 Bedford 06905
1962 Smeraldi, Richard Anthony, 44 Strawberry Hill Ave. 06902
1941 Smith, Leo Michael, Stamford Hospital 06902
1942 Stankard, William Francis, 51 Hartcroft Rd. 06902
1959 Steglich, Carl Peter, P.O. Box 1092 06904
1965 Steinberg, David Herman, 95 Morgan 06905
1975 Steinberg, Michael G., St. Joseph's Hospital 06902
1962 Steller, Robert Eugene, 95 Morgan 06905
1965 Strauch, Gerald Otto, 70 Mill River 06902
1961 Sullivan, John Joseph, Jr., 144 Morgan 06905
1967 Suttenfield, Virginia, 500 Wire Mill Rd. 06903
1949 Svedlow, Bernard Dave, 1767 Summer 06905
1977 Tai, Rafiq, 144 Prospect 06901
1950 Tella, Ralph Thomas, 107 Glenbrook Rd. 06902
1958 Trent, Joe Watson, Westover Park 06902
1940 Troy, William Daniel, 140 Hoyt 06905
1967 Usman, Ahmed, 1700 Bedford 06905
1970 Vinnick, Leonard, 1100 Bedford 06905
1968 Voss, Howard Evan, 144 Morgan 06905
1966 Walsh, Thomas Joseph, 1100 Bedford 06905
1957 Waxberg, Joseph David, 65 Prospect 06902
1976 Webber, Thomas G., 750 Summer 06901
1953 Weed, Clayton Bagshaw, 37 Glenbrook Rd. 06902
1975 Weinstein, Paul L., 140 Hoyt 06905
1969 Weisel, Alan, 47 Oak 06905
1967 Widrow, David Richard, 1425 Bedford 06905
1952 Williams, Frederick Davis, 1 Atlantic 06901
1956 Wilson, John Marion, Jr., 144 Morgan 06905
1976 Winter, Richard E., 2 Landmark Sq. 06921
1972 Winterhalter, Charles McNeill, Pitney Bowes, Walnut & Pacific 06904
1961 Wolfsohn, Alfred Werner, 31 Strawberry Hill Ave. 06902
1947 Wrona, Eugene Adam, 1435 Bedford 06905
1977 Yudkofsky, Paul Lester, 107 Glenbrook Rd. 06902
1954 Zalichin, Henry, 555 Newfield Ave. 06905
1954 Zimmern, Richard Lee, 1867 Summer 06905

STRATFORD 06497

1963 Asken, Saul, 2505 Main
1957 Biassey, Earle Lambert, 39 Stonybrook Rd.
1959 Birge, Elizabeth Barbara, 3017 Main
1947 Brown, Richard J., 1203 Prospect Dr.
1972 Cohen, Selwyn Alan, 2875 Main
1961 Copeck, Gerald, 39 Stonybrook Rd.
1969 Covey, William G., 2875 Main
1935 Del Vecchio, Leonard Frederick, 472A Commanche Lane, Oronoque Village
1961 Feroleto, George Joseph, 740 Oronoque Lane
1936 Friedman, Nathan Harris, Beaver Dam Rd.
1938 Giuliano, Louis Augustine, 655-A Osage La.
1975 Graham, John R., 33 King
1927 Haberlin, Chester Edward, 2553 Main
1977 Hulcher, William Gregory, 3060 Main
1956 Inder, Harry Albert, 162A Bisson Lane, Oronoque Village
1976 Jankowich, Raymond Elias, 3360 Main
1978 Jutkowitz, David Michael, 991 East Broadway
1941 Kaufman, William, 395A Ottawa La., Oronoque Village
1963 Keogh, Raymond Joseph, 3095 Main
1978 Kirkland, John Wilkinson Jr., 3017 Main
1959 Levieff, Leo, 2875 Main
1964 Levy, Samuel Howard, 3007 Main
1953 Licciardello, Anthony Thomas, 2875 Main
1946 Lyddy, John Roger, 2875 Main
1952 McGarry, John F., 18 King
1960 Naci, Yildizalp Mehmet, 2875 Main
1955 Peterson, Richard Charles, 3966 Main
1942 Roberge, George Edward, 51 Meadowmere Rd.
1960 Weitzner, Arthur, 373 Nichols Ave.
1947 Zielinski, John Blaise, 413 Ocean Ave.

TRUMBULL 06611

LONG HILL

1933 Adzima, Joseph Matthew, 45 West Lake Rd.
1957 Austrian, Herman, 935 White Plains Rd.
1961 Citrano, Eugene Charles, 502 White Plains Rd.
1935 Creaturo, Nicholas Edward, 10 Rockland Rd.
1958 Cronan, Thomas Leo, 4719 Madison Ave.
1973 Crossman, Wayne Francis, 600 Tashua Rd.
1962 Giangrasso, Anthony Eugene, 6363 Main
1974 Koehler, Paul Burrell, Chesbrough Pond's Inc.
1977 Kunkel, Maureen Herlihy, 24 Whalburn Ave.
1948 Mack, Arthur Gerard, 1918 Huntington Tpke.

1960 Neth, William Francis, Trumbull Center
1958 Sherlip, Bernard Jay, 935 White Plains Rd.
1942 Trautman, Edwin Fredercik, 5367 Main
1959 Veneruso, Ciro, 935 White Plains Rd.
1934 Wehger, Roland Theodore, 158 Plymouth Ave.
1973 Willis, John August, 6004 Main

WESTON 06880

1973 Albert, Joel Stuart, 8 stonehenge Rd.
1957 Bucky, Thomas Lee, Weston Rd.
1962 Schmiedeck, Raoul A. 34 Center Hills Rd.

WESTPORT

1970 Aaron, Stuart Denis, 251 Riverside Ave. 06880
1977 Abeles, John H., 3 Otter Trail 06880
1954 Adler, Daniel Harvey, 131 Kings Highway No. 06880
1948 Barnett, Roy Nathaniel, 125 South Compo Rd. 06880
1953 Beasley, Albert Sidney, 129 Kings Highway No. 06880
1960 Beck, David, 44 Elm 06880
1952 Beinfield, Malcolm Sidney, 125 Kings Highway 06880
1966 Bender, Stuart Howard, 127 Kings Highway No. 06880
1957 Beres, Paul, 162 Kings Highway No. 06880
1954 Berman, Leo H., 17 Otter Trail 06880
1963 Brovender, Stanley, 2 Colony Rd. 06880
1973 Brown, Harry J., 310 Main 06880
1971 Carroll, Robert McHenry, 246 East State 06880
1963 Cassell, Robert Theodore, 225 Main 06880
1973 Chumnanvech, Nongnuch L., 10 North Ridge Rd. 06880
1976 Chumnanvech, Theerayut, 10 North Ridge Rd. 06880
1973 Czuczka, Peter, 129 King's Highway No. 06880
1961 Doctor, Daniel W., 129 Kings Highway No. 06880
1973 Doctor, Judith Eva, 129 Kings Highway No. 06880
1962 Dolberg, Harold M., 2 Mayflower Pkwy. 06880
1965 Dorison, Ezra Eli, 136 Main 06880
1975 Duleep, Kodendera Subbiah, 125 Kings Highway No. 06880
1930 Ellrich, David Lionel, 266 State 06880
1975 Frumkin, Samuel, 162 Kings Highway No. 06880
1958 Goehausen, Myles Conrad, 266 East State 06880
1956 Gordon, Benjamin Dichter, 161 Sturges Highway 06880
1976 Greenburg, Jerry L., 131 Kings Highway No. 06880
1976 Herbstman, Martin Stuart, 125 Kings Highway No. 06880
1960 Hughes, William Francis, 125 Kings Highway 06880
1965 Kallick, Charles John, 35 East Main 06880
1955 Kaunitz, Paul E., 127 Kings Highway No. 06880
1965 Kessler, William, The Willows 06882
1970 Laffaye, Horace A., The Willows 06880
1947 Lebhar, Neil F., 20 Bay 06880
1970 Lewis, William Stanley, 830 Post Road, East 06880
1958 Lichtman, Alvin, 24 Easton Rd. 06882
1977 Lieberman, Gerald, 162 Kings Highway No. 06880
1969 Lieberson, Alan David, 162 Kings Highway No. 06880
1973 Lippman, Kenneth J., 225 Main 06880
1972 Loveless, Mary H., 22 Cavalry Rd. 06880
1976 Luck, Leon Eugene, 225 Main 06880
1950 Lynch, Franklin, 20 Bay 06880
1952 Micheels, Louis Joseph, 129 Kings Highway No. 06880
1965 Moadel, Michael Moosa, 170 West State 06880
1934 Morgan, William Oliver, 269 Main 06880
1975 Moskowitz, Robert Stephen, 225 Main 06880
1959 Perlis, Sanford James, 131 Kings Highway No. 06880
1978 Poll, Gerda G., 4 Berkeley Place, 06880
1968 Raff, Neil Charles, 32 Imperial Ave. 06880
1967 Roberts, Gerald David, 162 Kings Highway No. 06880
1970 Robins, Richard John, 431 East State 06880
1969 Rossi, Joseph P., 8 Ferry La. East 06880
1958 Sacks, Herbert Simeon, 35 East Main 06880
1971 Schneider, Robert George, 253 Riverside Ave. 06880
1952 Schultz, Martin, 81 Myrtle Ave. 06880
1970 Shapiro, Howard I., 131 Kings Highway No. 06880
1975 Shapiro, J. Robert, 236 Hills Point Rd. 06880
1958 Shiller, Jack Gerald, 129 Kings Highway No. 06880
1941 Shoup, Homer B. Jr., 131 Kings Highway No. 06880
1967 Silberman, Charles George, 136 Main 06880
1972 Singer, Joel Barnett, 32 Imperial Ave. 06880
1977 Sivak, Denis M., 131 Kings Highway No. 06880
1943 Solway, Rueben Isaac H., 1 St. John Pl. 06880
1961 Steinberg, Harold, 162 Kings Highway No. 06880
1977 Storch, Marc P., 225 Main 06880
1950 Syz, Hans, 30 Turkey Hill Rd. So. 06880
1960 Tec, Leon, 11 Rocky Field Rd. 06880
1977 Tse, Yat T., 32 Imperial Ave. 06880
1960 Wasserman, Harvey Robert, 136 Main 06880

WILTON 06897

1975 Appleby, Robert Earle, 55 Danbury Rd.
1974 Campbell, Carleton, 347 Nod Hill Rd.
1976 Cohn, Warren Meisel, 19 Old Ridgefield Rd.
1976 D'Souza, Arthur George, P.O. Box 793
1966 Franklin, David Noel, Merwin Building
1972 Jonas, Sarah, Linden, Old Ridgefield Rd., P.O. Box 632
1975 Lehmann, Walter Xavier, 27 Cricket Lane
1948 Maidman, Leonard, P.O. Box 218
1975 Martin, Dean Nelson, 55 Danbury Rd.
1977 Silverman, Charlene Kaiser, 97 Highfield Rd.
1977 Tricarico, Victor John, 33 Danbury Rd.
1954 Zucker, Richard Arthur, Cricket Lane

OUT OF COUNTY

1940 Adams, Mary, c/o Mrs. W. F. King, P.O. Box 628, Bath, Maine 04530
1929 Amos, Isadore Louis, Sun Valley Estates, Tarpon Springs, Florida 33589
1947 Anton, Michael Charles, U. S. Military Academy, Stewart Health Clinic, Newburgh, N.Y. 12550
1947 Barber, Richard Robbins, 4520 No. Camino Kino, Rt. No. 5, Box 702, Tucson, Arizona 85718
1936 Beck, Eugene Cornelius, 301 Park Ave., New York City, New York 10028
1955 Boas, Norman Francis, 100 Clift, Mystic 06355
1926 Bowman, Stuart Howard, 3300 Gulf Shore Blvd., Naples, Florida 33940
1965 Chiaramonte, Cajetan Thomas, R.D. #1, Bloomer Rd., North Salem, N.Y. 10560
1942 Colmers, Rudolf Albert, 217 East Huntingdon, Savannah, Georgia 31401
1937 Cunningham, Robert D.M., 976-A Heritage Village, Southbury 06488
1934 D'Andrea, Frank Henry, Strawberry Hill Farm, Shoreham, Vermont 05770
1928 Delohery, Cornelius Leo, 56 W. Arch Dr. Lake Worth, Florida 33460
1959 Dobson, John Patrick, G. Pierce Wood Mem'l Hosp., Arcadia, Florida 33821
1968 Dudley, James Patrick, 12647 Homewood Way, Los Angeles, California 90049
1937 Egee, J. Benton, 951A Heritage Village, Southbury 06488
1951 Epstein, Ezra J., Bayberry Way, Pound Ridge, New York 10576
1964 Franklin, Marshall, 16766 Bernardo Ctr., Dr. Suite #103 A, San Diego, California 92128
1946 Goodrich, William F., 405-C Spyglass La., Vero Beach, Florida 32960
1940 Grigas, John E., P.O. Box 362, Basking Ridge, New Jersey 07920
1972 Halloran, James V., 68 John Joseph Rd., Harwich, Mass. 02645
1967 Hassan, Kamal A., Magnolia Doctor's Plaza, Corinth, Mississippi 38834
1960 Henry, Philip Daniel, 299 Seymour Ave. Derby 06418
1968 Homer, Donald R., New Milford Hospital, New Milford 06776
1955 Huss, Geraldine Rider, 514 Nordhoff Dr. Leonia, New Jersey 07605

1944 Inkster, James H., 5 Hastings Ave., Keene New Hampshire 03431
1964 Keddy, Russell Alfred, 651 Southwest Sixth, Pompano Beach, Florida 33060
1955 Keleman, Eugene, 1221 W. Lincoln Ave., Montebello, California 90640
1938 Keys, Robert Cathcart, Winchester, Kansas 66097
1927 Levy, Maurice Noel, 9660 W. Bay Harbor Dr., Bay Harbor Islands, Florida 33154
1933 Lockwood, Jane, Baldwin Hill Rd., New Preston 06777
1950 Losito, Amedeo Joseph, 2888 S. E. Italy, Port St. Lucie, Florida 33452
1948 Luria, Sydney, 3501 Keyser Ave., #21, Hollywood, Florida 33021
1974 McKnight, William Kuhn, 704 Norfolk Ct., Rio Rancho, New Mexico 87124
1938 McLean, T. Smith, Village Green, 7300 Rt. 60, Vera Beach, Florida 32960
1975 Mehta, Sukh Sampat Raj, Loma Linda Univ., Loma Linda, California 92354
1936 Moore, Clifford Douglas, 129 E. Lae Dr., Lehigh Acres, Florida 33936
1944 Morrissett, Leslie Emerson, 5104 Riverside Dr., Richmond, Virginia 23225
1938 Murphy, Charles Anthony, Champlain Rd., Chatham, Massachuetts 02633
1951 Murphy, John Christopher, 275 7th Ave., New York, New York 10011
1947 Northman, Frank Fred, 3223-B Viacarrizo, Laguna Hills California 92653
1938 Padula, Ralph Domenick, 302 Oak Hill, Fort Meyers, Florida 33907
1945 Pearce, Marvin G., 1408 Rabb Rd., Barton Ter., Austin, Texas 78704
1939 Reynolds, Whitman Mead, R. F. D. 1, Box 77A, Stonington 06378
1935 Rogers, Robert Page, Box 245, North Chatham, Massachusetts 02650
1940 Shaw, Lillian Eloise, Baldwin Hill Rd., New Preston 06777
1938 Sherman, Saul Harvey, 152 E. San Mateo Rd., Santa Fe, New Mexico 87500
1977 Sibrack, Laurence Allen, 100 Hemlock Rd., Branford 06405
1958 Simon, H. Joseph, V. A. Hospital, Waco, Texas 76708
1930 Sollosy, Alexander, 3200 Palm-Aire Dr. No., Apt. 404 Pompano Beach, Florida 33060
1949 Spannaus, Fred C. Jr., Rt. 199, Roxbury 06783
1975 Speth, C. Peter, 1912 Linda Vista, Turlock, California 95380
1950 Spinelli, Nicholas P. R., 103 Housatonic Dr., Devon 06460
1937 Stietzel, Eric Ernst, 10810 Munzanita Dr., Sun City, Arizona 85373
1935 Strayer, Luther Milton, P.O. Box 366, Lancaster, New Hampshire 03584
1938 ter Kuile, Roger Couvelle, 117 W. Main, Lebanon, Illinois
1959 Tucker, Elizabeth Mackay, Community Care Ctr., 273 State, Springfield, Mass. 01103
1957 Van Poznak, Frederick, #2 Rivermeade Ct., Ranelagh Gardens, London, England SW6-3RT
1971 Walker, Granville Inman, Jr., The Chase Manhattan Bank, New York, New York 10015
1946 Williams, Francis Pryor Anthony, 2100 N. Peninsula Ave., New Smyrna Beach, Florida 30200
1958 Willis, Thayer, 2757 N.E. 31st, Lighthouse Point, Florida 33064
1953 Zehrung, William John, P.O. Box B, New Milford 06776

Hartford County Association

President: Lawrence B. Ahrens, 300 Main, New Britain 06051
Vice-President: Roger S. Beck, 85 Jefferson, Hartford 06106
Secretary-Treasurer: Arthur D. Keefe, 477 Conn. Blvd., East Hartford 06108
Councilor: Joseph S. Sadowski, 1000 Asylum Ave. Hartford 06105
Associate Councilors:
Iving I. Rosenthal 701-C Cottage Grove Rd. Bloomfield 06002
Trudeau M. Horrax, 151 Waterville Rd., Farmington 06032
Executive Director: Mr. Joseph L. Gordon
Executive office: 1000 Asylum Ave., Hartford 06105
Annual Meeting, First Wednesday in April
Semi-Annual Meeting, Fourth Wednesday in September

AVON 06001

1976 Candels, Lothar Richard, 2 Mountain View Ave.
1974 Cohen, Ronald H., 18 West Avon Rd.
1975 Farraye, Joseph J., 20 West Avon Rd.
1954 Hamilton, T. Stewart, 50 Bayberry Hill Rd.
1964 Harrop, James Shields, 51 Hitchcock Lane
1949 Howard, Laura Koon, 25 Aronside
1961 Koff, Arnold M., Avon Professional Center
1946 Larson, Albert Lloyd, 104 Reverknolls
1961 Lynch, Mark Edward, Avon Professional Center
1943 Marinaro, Nicholas Anthony, 51 Westridge Dr.
1973 Norbert, Gary Francis, 18 West Avon Rd.
1959 Orgun, Ibrahim Necmi, 44 Craigmore Circle
1973 Schubert, Anthony Stephen, 20 West Avon Rd.
1931 Standish, Welles Adams, 24 Crocus Lane
1949 Williams, William Edward, West Avon Rd.

BERLIN 06037

1932 Seibert, Alfred Frank, 1511 Farmington Ave.

BLOOMFIELD 06002

1956 Alderman, Melville Yale, 701 Cottage Grove Rd.
1949 Bagnall, Richard Salmon, 616 Bloomfield Ave.
1947 Bernstein, Louis, 3 East Lane
1965 Borden, Walter A., 701 Cottage Grove Rd.
1974 Callan, Walter Michael, 701 Cottage Grove Rd.
1952 Carrabba, Salvatore R., 701 Cottage Grove Rd.
1977 Case, Arnold Lowell, 701B Cottage Grove Rd.
1943 Chester, Lewis L., 701 Cottage Grove Rd.
1976 Cohen, Isaac, c/o H.S. Brown, 40 Walker La.
1975 Cohen, Robert B., 701 Cottage Grove Rd.
1975 Das, Amal, 701 Cottage Grove Rd.
1975 Edelstein, Barbara L., 701 Cottage Grove Rd.
1974 Elazegui, Rosalinda A., Conn. General Life Ins. Co.
1977 Ferguson, Robert P., 1 Regency Dr.
1976 Fischer, Nathan Roberto, 701 Cottage Grove Rd.
1971 Gandel, Paul Nelson, 701 Cottage Grove Rd.
1974 Geetter, Albert L., 701 Cottage Grove Rd.
1947 Gurwitz, Jack, 701 Cottage Grove Rd.
1967 Harris, Robert Lester, 701-B Cottage Grove Rd.
1931 Hirshberg, Manuel Shelton, 23 Oak Lane
1973 Hoffman, Lee Ira, 701 B Cottage Grove Rd.
1963 Hurwit, Albert Coleman, 701 Cottage Grove Rd.
1936 Hurwitz, George Hillel, 701 B Cottage Grove Rd.
1977 Jarvis, Phyllis R., 701 B. Cottage Grove Rd.
1956 Knox, A. E. Hertzler, 125 Wadhams Rd
1977 Lazarus, Barry Alan, 701 C Cottage Grove Rd.
1965 Levine, Marvin, 41 Jerome Ave.
1973 Liebowitz, Seymour A., 701 Cottage Grove Rd.
1976 Malik, Javed Mahmood, 701 Cottage Grove Rd.
1975 Mantel, Fred, 701-A Cottage Grove Rd.
1952 Marshall, Daniel, 701 Cottage Grove Rd.
1975 Miller, Bennett, 41 Jerome Ave.
1974 Miller, Joel Michael, 711 Cottage Grove Rd.
1957 Mittelman, Jay Arnold, 701F Cottage Grove Rd.
1960 Newell, Richard Clark, 711 Cottage Grove Rd.
1975 Nova, Sheldon, 701-D Cottage Grove Rd.
1977 Passman, Bernard, 701B Cottage Grove Rd.
1977 Pasternack, Samuel 701 Cottage Grove Rd.

1962 Richman, Sidney Morris, 701 Cottage Grove Rd.
1973 Rimai, Mervyn Leon, 1 Regency Dr.
1933 Rosenthal, Irving Isaac, 701-C Cottage Grove Rd.
1974 Saxon, Ronald J., 701 Cottage Grove Rd.
1962 Schmoll, Ralph Dale, 711 Cottage Grove Rd.
1947 Schnap, Isidore, 5 Crestview Dr.
1964 Sereda, Lawrence Evans, 701 Cottage Grove Rd.
1936 Slossberg, David Seymour, 1045 Blue Hills Ave.
1973 Srinivasan, Jane Padmini, 1 Regency Dr.
1973 Stern, P. Gary, 701 Cottage Grove Rd.
1974 Sunkin, David Frederick, 701-C Cottage Grove Rd.
1971 Ungar, Joseph Irwin, 1 Regency Dr.
1958 Vecchiolla, John Anthony, 701 Cottage Grove Rd.
1971 Weiss, Stephen A., 701 Cottage Grove Rd.
1975 Werner, Herbert Jay, 41 Jerome Ave.
1973 Wyse, L. Arnold, 701 Cottage Grove Rd.

BRISTOL

1968 Alisberg, Norman, Bristol Hospital 06010
1976 Allam, Abdel F., 196 Woodland 06010
1966 Argall, Temby Richie, Bristol Hospital 06010
1957 Ayotte, Lionel Alfred, 45 Prospect 06010
1976 Bae, June G., P.O. Box 837
1970 Bagdasarian, Ara Der, 105 Woodland 06010
1975 Baltazar, Arturo Erfe, P.O. Box 255 06010
1973 Baptist, Vincent, 291 Queen 06010
1967 Bean, Kenneth Forte, 199 Riverside Ave. 06010
1934 Beatrice, Alphonse Anthony, 331 Main 06010
1948 Becker, Arnold H., 300 Main 06010
1958 Becker, Irwin William, 300 Main 06010
1978 Benoit, Kenneth George, 105 Woodland 06010
1936 Bird, Frederick Stamford, 12 Collins Rd. 06011
1947 Brezina, Philip Savage, 105 Woodland 06010
1946 Ciccarelli, Armanno William, 291 Queen 06010
1977 Comstock, Brian Emery, 258 Middle 06010
1975 Diaz, Oliver Balicat, 202 Queen 06010
1975 Doura, Marc Edouard, 472 Stafford Ave. 06010
1956 Driscoll, Arthur Joseph, 123 Maple 06010
1962 Erami, Mohammad, 75 High 06010
1973 Estela, Jose A., 94 Bellevue Ave. 06010
1976 Falk, Stuart, 3 Woodland 06010
1977 Ferguson, Dennis Donald, 300 Main 06010
1973 Flores, Pacifico G., 88 Goodwin 06010
1935 Flynn, William Henry, 12 Carleton Pl. 06010
1964 Fox, Edward Francis, 300 Main 06010
1947 Furniss, William Ernest, 190 Summer 06010
1958 Glass, Herbert Lee, 300 Main 06010
1937 Hall, Martin Irving, 752 Hill 06010
1946 Hanley, J. Bainbridge, Peacedale 06010
1978 Hennessey, Brian Charles, 100 Goodwin 06010
1952 Hershey, David Daniel, 101 Woodland 06010
1948 Hershman, Harry Herbert, 122 Maple 06010
1954 Holden, Wesley Wiberg, 291 Queen 06010
1963 Ill, Martin F., 258 Middle 06010
1962 Jensen, Gerald Otto F., 780 Farmington Ave. 06010
1975 Kaye, David Elliot, 300 Main 06010
1976 Kaye, Stephen Joel, 122 Maple 06010
1975 Kish, Leslie Stanley, Bristol Hospital 06010
1964 Labraico, James Michael, 51 High 06010
1951 LaPorte, Thomas Francis V., 33 Puritan Rd. 06010
1977 Manoharan, Nachiyappan, Bristol Hospital 06010
1965 McDermott, George Michael, 35 Woodland 06010
1974 Mendoza, Jose Porciuncula, 258 Middle 06011
1963 Mirabelli, Vittorio, 11 Harrison 06010
1974 Murray, Walter Charles, 122 Maple 06010
1973 Oceretko, Jaroslav, 56 Harrison 06010
1952 Perry, Douglas Dards, 1 Bellevue Ave. 06010
1946 Purney, John, 300 Main 06010
1970 Rappaport, Lawrence Neil, 300 Main 06010
1972 Robles, Mario Jose, 88 Goodwin 06010
1959 Russell, Donald Grant, 300 Main 06010
1961 Seguljic, Nicholas J., 202 Queen 06010
1969 Selsky, Leonard Mark, 683 Farmington Ave. 06011
1939 Tirella, Fred Francis, 85 Belden Gardens Dr. 06011
1957 Williamson, Robert James, 104 Stearns 06010
1934 Winters, Hyman W., 58 Bel Eden Gardens Dr. 06010
1930 Winters, Thomas Edgar, 103 Woodland 06010
1975 Wong, Shue W., 56 Boy, 06010

BROAD BROOK 06016

1977 Csemy, Antal, 107 Main

BURLINGTON 06085

1966 Lawlor, Eugene Francis, RFD #2, Summit Dr.

CANTON 06019

1977 Abraham, Richard Ira, Canton Professional Ctr.

COLLINSVILLE 06022

1949 Diters, Edward Nelson, Gildersleeve Ave.
1963 Kresge, Dwight J., RFD #1, Warner Rd.
1969 West, Harold Frederic, 64 Maple Ave.

EAST HARTFORD

1948 Acqua, Louis C., 40 Elm 06108
1969 Berger, Jonathan, 477 Connecticut Blvd. 06108
1976 Cihak, Helena, 477 Connecticut Blvd. 06108
1970 Danigelis, James Arthur, 477 Connecticut Blvd. 06108
1948 Danyliw, Joseph Michael, 110 Main 06118
1976 Daukas, Charles, 809 Main 06108
1968 DeFusco, Leonard Anthony, 477 Connecticut Blvd. 06108
1962 Fitzgerald, James Richard, 477 Connecticut Blvd. 06108
1966 Fogg, Lyman B., 477 Connecticut Blvd. 06108
1976 Gagnon, Paul Maurice, 477 Connecticut Blvd. 06108
1946 Golino, Emanuel Francis, 164 Main 06118
1957 Gustafson, Walter Elmer, 45 Connecticut Blvd. 06108
1955 Keefe, Arthur Dillon, 477 Connecticut Blvd. 06108
1965 Knights, William, 477 Connecticut Blvd. 06108
1974 Krenicky, Peter T., 477 Connecticut Blvd. 06108
1976 Lee, Wing Kwong, 96 Connecticut Blvd. 06108
1955 Loewenberg, Peter Christian, 33 Brown 06118
1934 Lublin, Raymond, 745 Main 06108
1939 Mirabile, Thomas Joseph, 59 Burnside Ave. 06108
1947 Murphy, John Joseph, 27 Wells Ave. 06108
1965 Palma, Joseph Francis, 477 Connecticut Blvd. 06108
1975 Pina, Burt D., 477 Connecticut Blvd. 06108
1948 Sirota, Harvey H., 3 Saunders 06108
1955 Stearns, Colby Starnaman, 447 Connecticut Blvd. 06108
1967 Sullivan, Robert Michael, 447 Connecticut Blvd. 06108
1974 Tandon, Kishan Narain, 477 Connecticut Blvd. 06108
1942 Trantolo, Arthur, 1559 Main 06108
1973 Zimmerman, Richard Steven, 49 Connecticut Blvd.
1950 Zyla, Edward J., 130 Burnside Ave. 06108

EAST HARTLAND 06027

1938 Birge, Henry L., North Granby Rd.

ELMWOOD 06110

1975 Giligian, John, 1166 New Britain Ave.
1932 Romaniello, Rocco John, 1086 New Britain Ave.
1975 Saunders, William Long, 12 Mayflower

ENFIELD 06082

1976 Arbulu, Alfredo A., 535 Hazard Ave.
1977 Donahue, George Michael, 150 Hazard Ave.
1976 Durrani, Jehangir, 810 Enfield
1960 Figueroa, Francis Javier, 258 Hazard
1977 George, Lily, 150 Hazard Ave.
1976 George, Sebastian Parisutham, Enfield Professional Center
1970 Himelstein, Samuel Carl, 810 Enfield
1968 Hollander, Jules S., 5 North Main

1971 Mathews, John, 150 Hazard Ave.
1977 O'Brien, Stephen Thomas, 150 Hazard Ave.
1977 Segool, Richard Alan, 115 Elm
1975 Woods, William Allen F., 150 Hazard Ave.

FARMINGTON 06032

1977 Armstrong, William Leckie, Univ. Conn. Health Center
1946 Barbour, Paul Humphrey, Jr., 2 High
1970 Blechner, Jack Norman, Univ. Conn. School of Medicine
1970 Burnham, Bruce E., 340 Main
1973 Choi, Chang Song, 10 Candlewood La.
1964 Davenport, John Joseph, Jr., 287 Main
1978 Davidoff, Frank Fisher, Univ. Conn. Health Ctr.
1971 Gross, Elliot M., P.O. Box 427
1968 Hinz, Carl Frederick, Jr., Univ. Conn. School of Medicine
1976 Hochman, Howard Irwin, Un. Conn. Medical Ctr.
1965 Horrax, Trudeau M., 151 Waterville Rd.
1959 Jones, Emily Edwards, 273 Main
1974 Katz, Alfred J., 209 Farmington Ave.
1967 Leach, Charles Nelson, Jr., 174 Main
1968 Lepow, Irwin Howard, Univ. Conn. Health Center
1968 Lepow, Martha Lipson, Univ. Conn. Health Center
1974 MacDonald, Robert James, 24 Ridgeview Dr.
1976 Maresh, Henry Randall, 2 High
1970 Massey, Robert Unruh, Univ. Conn. School Medicine
1963 Mauck, F. Taylor, 1 Mill Lane
1977 McCormick, James Richard Jr., Univ. Conn. Health Ctr.
1978 Meyer, Roger B., Univ. Conn. Health Ctr.
1933 Mirabile, Charles S., 34 Mountain Rd.
1975 Mozzicato, Sebastian, Dir. Alcohol Tr. Prog, Univ. Conn. Health Ctr.
1941 O'Connell, Enos Joseph, 12-B Greenbriar Dr.
1970 O'Rourke, James, Univ. Conn. Health Center
1966 Patterson, John W., Univ. Conn. Health Ctr.
1929 Pike, Maurice Mitchell, Old Mountain Rd.
1957 Sherpick, William Edwards, 1 Mill Lane
1975 Silverman, Samuel Morris, 263 Farmington Ave.
1978 Snyder, G. Gordon III, Univ. Conn. Health Ctr.
1978 Sparks, Frank Converse, Univ. Conn. Health Ctr.
1963 Stockwell, Richard Matheson, Univ. Conn. Health Ctr.
1968 Sunderman, Frederick William, Jr., Univ. Conn. School of Medicine
1976 Thompson, Hartwell Greene, Univ. Conn. Health Ct.
1966 Walker, James Eliot Cabot, Univ. Conn. Health Ctr.

FORESTVILLE 06011

1931 Frost, Lawrence Hubbard, 14 Fireside Lane

GLASTONBURY 06033

1976 Balakrishna, Srimathi, 2900 Main
1960 Baxter, Marion Florence, 315 Tall Timbers Rd.
1970 Drury, Robert Warwick, 2900 Main
1975 Galvin, J. Robert, 122 Minnechaug Dr.
1935 Griswold, Edwin Monroe, 2869 Main
1977 Gundersen, Charles Arthur, 301 Tall Timbers Rd.
1976 Henry, William Bond, 2900 Main
1973 Horrigan, Thomas Henry, 87 Karen Lee Rd.
1976 Kaplan, Nathaniel Richard, 118 Stevens La.
1950 Lohman, William Henry, 2900 Main
1973 McDonald, June 2638 Main
1971 Mintell, David Frederick, 124 Hebron Ave.
1975 O'Connor, Christopher Francis, 2900 Main
1949 Platz, Edward John, 100 Brookhaven Dr.
1957 Preble, Charles Richmond, 1420 Main
1969 Price, John Thomas, 2900 Main
1939 Raffa, Joseph, 2638 Main
1961 Rentsch, Juanita Brown, 242 Hubbard
1961 Rentsch, Samuel Burton, Jr., 242 Hubbard
1946 Ricca, Renato A., 28 Ripley Rd.
1961 Taylor, Richard Fiske, 259 Three Mile Rd.
1975 Vacek, William John, 124 Hebron Ave.

SOUTH GLASTONBURY 06073

1958 Bellucci, Aldo Louis, 34 Lakewood Rd.

GRANBY 06035

1968 Barwick, Peter E., 50 Hartford Ave.
1975 Blomquist, William Stewart, 50 Hartford Ave.
1978 Choe, Jung Kyo, 17 Hartford Ave.
1953 Dwyer, Ruth Tychsen, 261 Salmon Brook
1952 Dwyer, William John, 261 Salmon Brook

HARTFORD

1961 Alden, John Ordway, 151 Farmington Ave. 06115
1975 Alder, William C., 660 Prospect Ave. 06105
1977 Alhanna, Youssef, 1000 Asylum Ave. 06105
1975 Allan, Thomas Renard, 85 Jefferson 06106
1941 Allen, John Clinton, Hartford Hospital 06115
1974 Allmendinger, Philip D., 85 Jefferson 06106
1970 Allport, Vernon Garfield, 99 Pratt 06103
1969 Alter, Burton Norman, 85 Jefferson 06106
1968 Amato, Peter Robert, 1000 Asylum Ave. 06105
1970 Anastasi, Anthony Frank, 21 Woodland 06105
1953 Anderson, Gustav Walter, 85 Jefferson 06106
1958 Andrews, A. Ezra, Mt. Sinai Hospital 06112
1976 Andrulonis, Paul A., Institute of Living 06106
1977 Angiolicchio, Ruggero, 481 Farmington Ave. 06105
1936 Apter, Harry, 99 Pratt 06103
1976 Aronson, Alfred Lars, Mt. Sinai Hospital 06112
1952 Aseltine, Deal T. Jr., 283 Collins 06105
1964 Babcock, Albert Lethiccq, 100 Retreat Ave. 06106
1976 Babenco, George O., St. Francis Hospital 06105
1972 Baggish, Michael S., Mt. Sinai Hospital 06112
1968 Bagnall, John S., 85 Jefferson 06106
1970 Bailey, Richard H., 1 American Row 06103
1959 Baker, Gerald Lynn, 85 Jefferson 06106
1957 Baltrucki, Henry Chester, 140 Woodland 06105
1954 Barald, Fred Charles, 1000 Asylum Ave. 06105
1976 Barreto, Anibal Ramon, 100 Retreat Ave. 06106
1964 Bartus, Stanislaus Anthony, 85 Jefferson 06106
1958 Basile, John X. R., 140 Woodland 06105
1975 Bass, David M., 85 Jefferson 06106
1972 Basu, Subrata K., 140 Woodland 06105
1949 Beakey, John Francs, 287 Collins 06105
1957 Beck, Roger Seaton, 85 Jefferson 06106
1948 Beckett, Ronald Stewart, Hartford Hospital 06115
1944 Beebe, John Taylor, 85 Jefferson 06106
1950 Bellizzi, Joseph John, 60 Gillett 06105
1962 Bendett, Rodman Jordan, 60 Gillett 06105
1977 Benson, Jay Barry, 1000 Asylum Ave. 06105
1968 Berland, Robert Howard, 21 Woodland 06105
1962 Berlin, Bert B., 85 Jefferson 06106
1974 Blanchard, Bradford Martin, 85 Jefferson 06106
1975 Bloom, George Peter, 85 Jefferson 06106
1941 Bobrow, Aaron, 500 Blue Hills Ave. 06112
1963 Boelhouwer, Cornelis, 80 Seymour 06115
1962 Bonney, Henry Thurston, Hartford Hospital 06115
1957 Book, Donald Thompson, 151 Farmington Ave. 06115
1967 Boren, Charles Wilson, 200 Retreat Ave. 06106
1970 Bower, Bruce F., 100 Retreat Ave. 06106
1951 Braceland, Francis J., 200 Retreat Ave. 06106
1975 Bradley, Donald F. Jr., 85 Jefferson 06106
1941 Brandon, Kenneth Francis, 128 Oxford 06105
1969 Brenneman, Austin Russell, 85 Jefferson 06106
1946 Brewster, William B. Jr., 85 Jefferson 06106
1972 Bridburg, Richard Martin 200 Retreat Ave. 06106
1974 Broadhead, Alan John, 100 Retreat Ave. 06106
1976 Bronson, William Raymond, Hartford Hospital 06115
1975 Brown, Borden, 1000 Asylum Ave. 06105
1960 Brown, Donald Leroy, Hartford Hospital 06115
1970 Brown, Louis, 21 Woodland 06105

1954 Brown, Richard Braddock, 400 Washington 06106
1975 Brown, Stephen Allen, 1000 Asylum Ave. 06105
1942 Bruskin, Chaim Elias, 1840 Park 06106
1929 Buck, Burdette Jay, c/o Hart. Nat'l Bank & Trust Co. 06103
1966 Bucknam, Charles Allen, 100 Retreat Ave. 06106
1948 Bunce, James Merrill, 85 Jefferson 06106
1968 Burchell, R. Clay, Hartford Hospital 06115
1978 Butler, Alan R., 85 Jefferson 06106
1949 Butterfield, Walter Lamont, Jr., 85 Jefferson 06106
1957 Caldarelli, Raymond August, 1000 Asylum Ave. 06105
1950 Calio, James Vincent, 21 Woodland 06105
1972 Calogero, John A., 1000 Asylum Ave. 06105
1967 Cameron, Ian Richard, 100 Retreat Ave. 06106
1948 Carangelo, John, 140 Woodland 06105
1954 Carlton, Lawrence S., 560 Hudson 06106
1960 Carpentieri, Joseph, 1000 Asylum Ave. 06105
1948 Cartland, John Everett, Jr., 85 Jefferson 06106
1965 Casale, Albert Joseph, 1000 Asylum Ave. 06105
1963 Castagno, Marion MacDonald, 215 Washington 06106
1949 Castagno, Rowe Anthony, 215 Washington 06106
1978 Castner, James J., 1000 Asylum Ave. 06105
1977 Charen, Walter David, 85 Jefferson 06106
1946 Chaucer, Norton G., 56 Coventry 06112
1976 Chawla, Surendra Kumar, 21 Woodland 06105
1976 Cinti, Dorothy Carroll, St. Francis Hospital 06105
1971 Clark, Isaiah, 100 Retreat Ave. 06106
1969 Clarke, William Augustin, Conn. Gen. Life Ins. Co. 06115
1959 Cobb, Richard J., 50 Canterbury 06112
1961 Coelho, Julio Nunes, 60 Gillett 06105
1936 Cogswell, Lawrence Perley, 85 Jefferson 06106
1938 Cohn, Samuel Hills, 111 Pearl 06103
1948 Cole, Milton Julius, 365 Blue Hills Ave. 06112
1965 Coley, Geoffrey MacDonell, 85 Jefferson 06106
1964 Collias, James Charles, 85 Jefferson 06106
1954 Conant, Roger Garrett, St. Francis Hospital 06105
1949 Conway, Edward Joseph, 85 Jefferson 06106
1955 Cooke, Ronald Wilbur, 85 Jefferson 06106
1960 Cooper, Paul A., 85 Jefferson 06106
1944 Cramer, Sidney Leo, 21Woodland 06105
1963 Crawford, Jerry, 21 Woodland 06105
1969 Crombie, H. David, Jr., 85 Jefferson 06106
1962 Cronin, Robert John, 85 Jefferson 06106
1955 Cullen, Chester Francis, 1000 Asylum Ave. 06105
1954 Cullina, Joseph Charles, St. Francis Hospital 06105
1977 Cunha, Burke A., Hartford Hospital 06115
1969 Cunin, Burton Maurice, 270 Constitution Plaza 06103
1961 Curis, Francis Thomas, 140 Woodland 06105
1968 Curran, John Joseph, Institute of Living 06106
1946 Curran, Timothy Leonard, 106 Gillett 06105
1972 daCosta, Jose Ferreira, 631 Park 06106
1974 Dake, Peter Denteh, 31 Woodland 06105
1970 D'Alotto, John Anthony, 1000 Asylum Ave. 06105
1955 Daniels, Evans Howard, Jr., 520 Albany Ave. 06120
1976 Daoud, Ibrahim Michael, 140 Woodland 06105
1968 Dauphinais, Richard Murray, St. Francis Hospital 06105
1972 DeCarolis, Kenneth A., 85 Jefferson 06106
1954 deChabert-Ostland, Jean Guido, 60 Gillett 06105
1966 DeGraff, Arthur C. Jr., 85 Jefferson 06106
1977 Dekker, Paul Tunis, 100 Retreat Ave., Suite 605 06106
1952 Delgado-Fourzan, Enrique, 200 Retreat Ave. 06106
1946 Delligan, Francis William, 31 Woodland 06105
1966 DeMaio, John Thomas, 283 Collins 06105
1947 Deming, Archibald Staley, 85 Jefferson 06106
1949 Deming, Edward Griswold, 85 Jefferson 06106
1954 Denton, Cleveland Ray, 85 Jefferson 06106
1937 DePasquale, John Anthony, 182 Collins 06105
1975 Deutsch, Joel, 500 Blue Hills Ave. 06112
1973 Dickson, Charles Malcolm, 85 Jefferson 06106
1931 Dion, Asa Joseph, 207 Washington 06106
1944 Dion, Julien Andre, 207 Washington 06106
1966 Dobrow, Robert Jay, 85 Jefferson 06106
1944 Doerr, William John, 690 Prospect Ave. 06105
1955 Doherty, Robert C., 31 Woodland 06105
1951 Donnelly, John, 200 Retreat Ave. 06106
1958 Donovan, James Frederic, 85 Jefferson 06106
1957 Donovan, Thomas Joseph, 100 Retreat Ave. 06106
1965 Dougherty, Anthony James, St. Francis Hospital 06105
1962 Dowling, Kevin Vernon, 1000 Asylum Ave. 06105
1974 Duboczy, John Bela, 400 Washington 06106
1971 Dunn, Harrison, 171 Girard Ave. 06105
1951 Dunsmore, Rembrandt Harvey, 85 Jefferson 06106
1946 Dushane, Joseph Edward, 85 Jefferson 06106
1954 Eagan, E. Cecil, 114 Woodland 06105
1971 Edelstein, Stanley W., 449 Farmington Ave. 06105
1965 Edkin, Robert Edward, 1000 Asylum Ave. 06105
1948 Ellis, William Avery, 1000 Asylum Ave. 06105
1974 Ellison, Lee H., 85 Jefferson St. 06106
1969 Enowitch, Bennett, Irving, 60 Washington 06106
1962 Ergin, Muceddit Tahsin, 85 Jefferson 06106
1973 Evans, Jerome Edward, Institute of Living 06106
1975 Fahy, Richard A., 660 Prospect Ave. 06106
1961 Faiaz, Esmail K., 21 Woodland 06105
1949 Fairlie, Chester Wilson, Jr., 85 Jefferson 06106
1967 Fauliso, Richard Joseph, 283 Collins 06105
1919 Fay, William James, 98 Garden 06105
1975 Fenelon, Ernst, 1229 Albany Ave. 06112
1974 Ferrero, Vittorio, 400 Washington Ave. 06106
1977 Feuer, Michael Warren, 60 Gillett 06105
1957 Fieldman, Arnold, Hartford Hospital 06115
1954 Fierberg, A. Arthur, 21 Woodland 06015
1967 Fisher, Robert Lyle, 85 Jefferson 06106
1962 Fishman, Ronald Stanley, 1000 Asylum Ave. 06105
1951 Flaherty, Morgan Vincent, 36 Woodland 06105
1969 Flescher, Robert, 85 Jefferson 06106
1948 Foohey, Fleur Cornelius, 146 Jefferson 06106
1977 Fortier, Alexander Joseph, 100 Retreat Ave. 06106
1964 Fortin, Victor Louis, Jr., St. Francis Hospital 06105
1973 Foster, James Henry, 85 Jefferson 06106
1964 Fox, Brendan Michael, 1000 Asylum Ave. 06105
1947 Franco, John Estrela, 206 Ashley 06105
1968 Franklin, John B., 100 Retreat Ave. 06106
1968 Fredericks, Edward J., 85 Jefferson 06106
1956 Frederickson, Robert William, 85 Jefferson 06106
1956 Freedman, Myron Earl, 60 Gillett 06515
1970 Freymann, John Gordon, 999 Asylum Ave. 06105
1962 Friend, Hugh Borden, 100 Retreat Ave. 06106
1967 Gahm, Norman Henry, 85 Jefferson 06106
1974 Galen, Malcolm Arthur, 1000 Asylum Ave. 06105
1937 Galinsky, David, 35 North Whitney 06105
1971 Gaudio, Alexander R., 100 Retreat Ave. 06106
1967 Geary, Frederick Lawrence, 283 Collins 06105
1970 Geary, William John, 283 Collins 06105
1969 Geetter, David Meranski, 1000 Asylum Ave. 06105
1931 Geetter, Isidore Stolper, 92 Fern 06105
1959 George, Anastasios B., 85 Jefferson 06106
1972 Gerber, Joanna Seydel, 85 Jefferson 06106
1949 Giardi, Leo Paul, 561 New Britain Ave. 06106
1963 Giarnella, Egidio, 285 Franklin Ave. 06114
1970 Gibbons, John Martin, Jr., 114 Woodland 06105
1941 Gibson, Forrest Davis, 85 Jefferson 06106
1937 Giuliano, Sebastian, 434 Franklin Ave. 06114
1957 Given, James Bartley, 85 Jefferson 06106
1976 Glass, William Henry, 59 Gillett 06105
1962 Glassman, Herman H., 60 Gillett 06105
1934 Glaubman, Henry Mitchell, P.O. Box 26, Blue Hills Station 06112
1965 Godar, Thomas Joseph, St. Francis Hospital 06105
1968 Godlash, Kenneth Michael, 79 Retreat Ave. 06115
1966 Gold, Bertram, St. Francis Hospital 06105
1968 Gold, Herbert, 99 Pratt 06103
1936 Gold, Louis Henry, 21 Woodland 06105
1965 Goldberg, Morton Harold, 50 Gillett 06105
1930 Goldenberg, Jacob Joseph, 832 Albany Ave. 06112

1930 Goldenberg, Jacob Joseph, 832 Albany Ave. 06112
1952 Goldenberg, Philip Theodore, 140 Woodland 06105
1949 Goldenthal, Carol, 132 Jefferson 06106
1963 Goldman, Philip H., 99 Pratt 06103
1977 Goldman, Richard Louis, 85 Jefferson 06106
1967 Golub, Grant Richard, 80 Seymour 06115
1962 Gorman, Arthur Thomas, 100 Retreat Ave. 06106
1970 Gorman, David Joseph, 210 Ashley 06105
1954 Gossling, Harry Robert, 85 Jefferson 06106
1935 Gould, Max Martin, 387 Blue Hills Ave. 06112
1972 Grace, Thomas William, 140 Woodland 06105
1975 Graf, Thomas Michael, 387 Blue Hills Ave. 06112
1973 Graydon, Roland James, II, 85 Jefferson 06106
1969 Grayson, Donald Ross, 60 Washington 06106
1943 Greene, Gerald S., 85 Jefferson 06106
1971 Grey, Neil Jay, 60 Gillett 06105
1973 Grody, Marvin Henry, 50 Gillett 06105
1952 Gross, Norman David, 1000 Asylum Ave. 06105
1974 Guillette, William, 151 Farmington Ave. 06115
1969 Haksteen, John Jacob, Mt. Sinai Hospital 06112
1975 Hall, Francis M., 140 Woodland 06105
1970 Halligan, Thomas Joseph, Jr., 1000 Asylum Ave. 06105
1947 Hamlin, Charles H., 85 Jefferson 06106
1952 Hannan, William Stephen, 000 Asylum Ave. 06105
1978 Hanny, Thomas Anthony, 140 Woodland 06105
1965 Hardy, James H., 85 Jefferson 06106
1938 Harris, Louis David, 242 Trumbull 06106
1957 Hart, William Edmund, 77 Canterbury 06112
1974 Hasson, Jack, Mt. Sinai Hospital 06112
1960 Haugh, John Denis, 1000 Asylum Ave. 06105
1976 Hawkins, Harold Berton, 1000 Asylum Ave. 06105
1937 Hazen, Donald Robert, 51 Gillett 06105
1968 Healy, Joseph William, 287 Collins 06105
1965 Hedberg, David Leigh, 21 Woodland 06105
1972 Hensley, Ronald Verne, 400 Washington 06106
1974 Herzog, Alfred, 85 Jefferson St. 06106
1972 Hewett, William Joseph, 100 Retreat Ave. 06106
1975 Hewitt, J. Kent, 1000 Asylum Ave. 06105
1949 Hickcox, Curtiss Bronson, 85 Jefferson 06106
1969 Hickmon, Ned, 140 Woodland 06105
1976 Hild, David H., 100 Retreat Ave. 06106
1974 Hill, David Albert, 100 Retreat Ave. 06106
1974 Hill, Thomas Michael, Institute of Living 06106
1956 Himelstein, Monroe, 85 Jefferson 06106
1975 Hornblow, John Terry, 85 Jefferson 06106
1968 Horowitz, Benson Jay, 449 Farmington Ave. 06105
1955 Houck, John Howard, 200 Retreat Ave. 06106
1950 Howe, Edward Redfield, 85 Jefferson 06106
1959 Hughes, Calvin Thomas, Jr., 36 Gillett 06105
1962 Hull, Crawford, Hartford Hospital 06115
1953 Hulme, Stephen A., St. Francis Hospital 06105
1977 Humphrey, Chester Bowden, 85 Jefferson 06106
1969 Hurwitz, Myron Robert, 660 Prospect Ave. 06105
1960 Hyun, Jayson, St. Francis Hospital 06105
1970 Iger, Howard G., 200 Retreat Ave. 06106
1968 Izard, Mark Whitaker, 85 Jefferson 06106
1961 Jacuch, Michael, 245 Wethersfield Ave. 06114
1934 James, Lewis Paul, 104 Gillett 06105
1948 Janzen, Arnold Herbert, 85 Jefferson 06106
1961 Jeresaty, Robert M., St. Francis Hospital 06105
1961 Johnson, Donald William, 85 Jefferson 06106
1941 Johnson, Paul, 85 Jefferson 06106
1970 Jones, Richard F., III, 100 Retreat Ave. 06106
1976 Jones, William Dugmore, III, 100 Retreat Ave. 06106
1963 Kallfelz, Alois, St. Francis Hospital 06105
1955 Kaplan, Bernard Joseph, 21 Woodland 06105
1945 Karpe, Richard, 120 Kane 06119
1976 Kates, Richard Joel, 100 Retreat Ave. 06106
1924 Katz, Henry, c/o CBT Trust Dept., 1 Constitution Plaza 06115
1950 Kay, Richard, 85 Jefferson 06106
1960 Keefe, William Peter, 240 Ashley 06105
1977 Kellsey, David Canfield, 151 Farmington Ave. 06115
1920 Kelly, Claude Currie, 85 Jefferson 06106
1972 Kelly, Donald Robert, 85 Jefferson 06106
1950 Kemler, R. Leonard, 21 Woodland 06105
1960 Kiley, Robert Francis, 85 Jefferson 06106
1954 Kingston, Paul J., 1000 Asylum Ave. 06105
1966 Klatsky, Alan Usher, 100 Retreat Ave. 06106
1964 Kligerman, Sidney, 49 North Beacon 06105
1976 Knauft, Robert Frederic, 85 Jefferson 06106
1958 Knight, Harold Fuller, 140 Woodland 06105
1958 Knox, Kenneth Raven, 100 Retreat Ave. 06106
1970 Koff, Marvin Saul, 660 Prospect Ave. 06105
1954 Kosar, Walter Philip, 85 Jefferson 06106
1974 Kosto, Bernard, 85 Jefferson 06106
1944 Krall, Irving Hadley, 99 Pratt 06103
1956 Krieger, James L., 85 Jefferson 06106
1977 Krom, Elinor S., Mt. Sinai Hospital 06112
1978 Krumperman, LeRoy Wright, Jr., 85 Jefferson 06106
1962 Kuehn, Paul Gerhard, 85 Jefferson 06106
1964 Kugelman, Thomas Peter, 85 Jefferson 06106
1966 Laakso, William Bruce, 100 Retreat Ave. 06106
1977 LaFrenier, Roy Kenneth Jr., 100 Retreat Ave. 06106
1949 Lahey, William J., St. Francis Hospital 06105
1971 Lahiri, Bimalin, 114 Woodland 06105
1963 Landry, Arthur Bernard, Jr., 1000 Asylum Ave. 06105
1962 Langmann, Robert D., 85 Jefferson 06106
1943 Lapenta, Rocco George, 1307 Albany Ave. 06112
1972 Lashgari, Manocher, 21 Woodland 06105
1975 Lassman, M. Nathan, 1000 Asylum Ave. 06105
1976 Lazor, Michael Z., 85 Jefferson 06106
1951 Lee, William, Hartford Hospital 06115
1968 Lehman, William B., 85 Jefferson 06106
1962 Leicach, Mario, 85 Jefferson 06106
1956 Leonhardt, Charles George, Hartford Plaza 06115
1975 Lessow, Richard Joseph, 85 Jefferson 06106
1933 Levin, Albert Eliot, 242 Trumbull 06103
1954 Levreault, Gerald Victor, Conn. Gen. Life Ins. Co. 06115
1965 Levy, Benjamin, 85 Jefferson 06106
1978 Lilly, Richard B., Jr., 85 Jefferson 06106
1971 Linburg, Richard Murray, 85 Jefferson 06106
1973 Lindenberg, Leslie Barre, 85 Jefferson 06106
1965 Linnolt, Erik, 200 Retreat Ave. 06106
1974 Lippman, Leonard, 449 Farmington Ave. 06105
1967 Liss, Joseph Paul, St. Francis Hospital 06105
1946 Litter, Leo, 21 Woodland 06105
1949 Little, David Mason, Jr., 80 Seymour 06115
1974 Lloyd, Douglas Seward, 79 Elm 06115
1955 Lo Presti, Daniel A., 85 Jefferson 06106
1957 Low, Henry Bei Chung, 85 Jefferson 06106
1959 Luby, Meade Justin, 140 Woodland 06105
1963 Lucas, Joseph John, 17 Sisson Ave. 06106
1970 Lynch, William A., 85 Jefferson 06106
1968 Macaulay, William Philip, 85 Jefferson 06106
1964 Mackay, Iain Murray, 85 Jefferson 06106
1957 Malinconico, Lawrence Lorenzo, 136 Retreat Ave. 06106
1973 Manas, Alan, 270 Constitution Plaza 06103
1952 Mancall, Irwin Tuch, 21 Woodland 06105
1967 Mancoll, William, 100 Retreat Ave. 06106
1971 Mannix, Henry, Jr., 30 Woodland 06105
1975 Marchbanks, Vance Hunter, Jr., 31 Woodland 06105
1978 Marikar, Mohiyadin A.S., Institute of Living 06106
1976 Marino, Frank Sebastian, 51 Gillett 06105
1951 Markley, D. Norman, 422 Farmington Ave. 06105
1977 Maron, William Robert, 21 Woodland 06105
1959 Marshall, Bruce Robert, 85 Jefferson 06106
1965 Martin, Robert Stockton, 80 Seymour 06115
1952 McAndrews, James Francis, 85 Jefferson 06106
1964 McCarthy, John Denis, 140 Garden 06105
1974 McCawley, Austin, St. Francis Hospital 06105
1975 McCloskey, Edwin M., St. Francis Hospital 06105
1962 McCooey, John Henry, 85 Jefferson 06106

1952 McCormick, James Michael, Hartford Hospital 06115
1938 McCrann, Donald Joseph, 36 Woodland 06105
1967 McGowan, George E., 85 Jefferson 06106
1950 McKnight, Robert Scott, 200 Retreat Ave. 06106
1949 McLean, Charles Ellsworth, Hartford Hospital 06115
1935 McNulty, Terence Francis, 22 North Beacon 06105
1972 Mendelson, Louis Moses, 85 Jefferson 06106
1973 Meridy, Howard William, 85 Jefferson 06106
1971 Milikow, Edward, 500 Blue Hills Ave. 06112
1937 Miller, Harry Bernard, 21 Woodland 06105
1975 Miller, Lawrence W., 100 Retreat Ave. 06106
1977 Mitchell, Paul R., 100 Retreat Ave. 06106
1974 Mittelmann, Michael, 151 Farmington Ave. (W-A) 06115
1947 Moher, James J., 51 Gillett 06105
1954 Molloy, Robert Joseph, 1000 Asylum Ave. 06105
1966 Moloney, David Richard, 21 Woodland 06105
1977 Morrow, Jeffrey S., 85 Jefferson 06106
1972 Muangman, Pongsa-Pyn, 114 Woodland 06105
1973 Mucha, Theodore Frank, Institute of Living 06106
1970 Mueller, Robert Ernest, 85 Jefferson 06106
1977 Mumford, David, 615 Tower Ave. 06112
1975 Murphy, John D., St. Francis Hospital 06105
1972 Murray, James Hamilton, 85 Jefferson 06106
1969 Myerson, Manny, 1000 Asylum Ave. 06105
1978 Nagle, Mary P., St. Francis Hospital 06105
1957 Nakhoul, Jabbour, 1000 Asylum Ave. 06105
1975 Narayanan, Chandra N., 500 Blue Hills Ave. 06112
1938 Neidlinger, William James, 85 Jefferson 06106
1962 Neill, Mather Humphrey, 151 Farmington Ave. 06115
1975 Newman, Richard Arthur, 85 Jefferson 06106
1946 Nichols, Edward, 85 Jefferson 06106
1947 Nichols, Frederick L., 85 Jefferson 06106
1952 Nicholson, Richard Edwin, 140 Garden 06105
1973 Nino, Alfredo F., 85 Jefferson 06106
1948 Nolan, John O'Leary, 206 Ashley 06105
1961 O'Brien, Frederick John, 1000 Asylum Ave. 06105
1976 O'Brien, John Joseph, 140 Woodland 06105
1944 O'Connell, John Daniel, 140 Woodland 06105
1952 O'Connell, Thomas Joseph, St. Francis Hospital 06105
1973 O'Hayre, Walter Louis, 55 Trumbull 06103
1973 O'Hurley, John George, 1000 Asylum Ave. 06105
1977 Olson, Edmund Harold, 100 Retreat Ave., 06106
1953 Opinsky, Morton, 140 Woodland 06105
1976 O'Reilly, David John, 114 Woodland 06105
1977 Orfitelli, Orlando Peter, 116 Franklin Ave. 06114
1955 Ormrod, John Kenneth T., 151 Farmington Ave. 06115
1955 Otis, Richard Dickinson, Hartford Hospital 06115
1976 Oviedo, Alvaro, 1000 Asylum Ave. 06105
1976 Owlia, Dariush, 100 Retreat Ave. 06106
1958 Painter, Robert Warren, 85 Jefferson 06106
1963 Palermino, Donata Angelo, 136 Retreat Ave. 06106
1975 Parker, Lewis P., 100 Retreat Ave. 06106
1968 Pasternak, Herbert Stephen, 85 Jefferson 06106
1938 Peacock, Albert Upham, 85 Jefferson 06106
1976 Peck, Alexander S. Jr., 85 Jefferson 06106
1972 Pentz, Paul Gordon, 200 Retreat Ave. 06115
1976 Perkins, John H., 106 Gillett 06105
1944 Perkins, Joseph Augustine, 60 Gillett 06105
1975 Perlman, Sidney, 1000 Asylum Ave. 06105
1933 Phelps, Maxwell Overlock, 85 Jefferson 06106
1959 Phinney, Arthur O. Jr., 85 Jefferson 06106
1949 Piacente, Salvatore Sylvester, 140 Woodland 06105
1959 Pinkes, Sam, 21 Woodland 06105
1968 Pisetsky, Myron Matthew, 200 Retreat Ave. 06106
1944 Pitegoff, Gerald Irving, 60 Gillett 06105
1948 Pizzo, Paul S., 662 Wethersfield Ave. 06114
1967 Platt, Joan M., 85 Jefferson 06106
1976 Plaut, Eric A., 90 Washington 06115
1950 Polivy, Charles, 60 Gillett 06105
1975 Powell, Charles Porter, Hartford Life Insurance Co., Hartford Plaza 06115
1958 Powers, Edward Donald, 576 Farmington Ave. 06105
1948 Prestley, William Francis, 100 Retreat Ave. 06106
1949 Pulaski, John Edward, 40 Wethersfield Ave. 06114
1950 Pyrtek, Ludwig Joseph, 85 Jefferson 06106
1967 Quinto, Eugene Louis, 1000 Asylum Ave. 06105
1957 Radding, Philip, 60 Gillett 06105
1928 Radom, Myron Michael, 242 Trumbull 06103
1977 Ramanan, Sundaran Venkata, Mt. Sinai Hospital 06112
1978 Ranade, Vinay Ramchandra, 85 Jefferson 06106
1966 Raycroft, John Francis, 85 Jefferson 06106
1964 Reardon, George Emmett, St. Francis Hospital 06105
1950 Reed, John Francis, 85 Jefferson 06106
1978 Reed, Michael LeRoy, 100 Retreat Ave. 06106
1954 Reinfrank, Ralph Frank, Hartford Hospital 06115
1975 Rhee, Sang-Seol, 140 Woodland 06105
1972 Rich, Charles, 609 Farmington Ave. 06105
1963 Ridlon, Herrick Clark, 85 Jefferson 06106
1974 Rinaldi, Michael Joseph, Hartford Hospital 06115
1973 Ritland, Gerald David, 140 Woodland 06105
1977 Ritvo, Arnold S., 85 Jefferson 06106
1973 Roberts, Lloyd Eugene, 136 Retreat Ave. 06106
1969 Roberts, Melville Parker, 85 Jefferson 06106
1973 Robertson, Russell Wright, 85 Jefferson 06106
1977 Robinson, Charles Mebane, The Travelers Ins. Co. One Tower Square 06115
1953 Robinson, John Christie, One Tower Sq. 06115
1973 Robinson, Paul D. Jr., 151 Farmington Ave. 06115
1943 Rocco, Mario P., 500 New Britain Ave. 06106
1948 Roh, Charles Ernest, 85 Jefferson 06106
1970 Rosenberg, Jack Eli, 400 Washington 06106
1966 Rosenberg, Mervin, 100 Constitution Plaza 06103

1975 Rosenworcel, Elliott, 1000 Asylum Ave. 06105
1958 Ross, Wayne D., 85 Jefferson 06106
1965 Rossbaum, Robert Philip, 85 Jefferson 06106
1970 Rossi, Michael Andrew, 85 Jefferson 06106
1964 Rosson, Robert Stanley, 85 Jefferson 06106
1962 Rotatori, Eugene S., 111 Gillett 06105
1975 Rotenberg, Donald, 85 Jefferson 06106
1935 Roth, Frank Edward, 60 Gillett 06105
1963 Roth, Malcolm Shoor, 270 Constitution Plaza 06103
1957 Rouman, James Christ, 85 Jefferson 06106
1973 Roussis, Konstantinos, 1000 Asylum Ave. 06105
1946 Rubin, Albert, 60 Gillett 06105
1975 Ruderman, Mark, 85 Jefferson 06106
1977 Ruffett, Donald Stuart, 100 Retreat Ave. 06106
1948 Russo, Joseph Nicholas, 85 Jefferson 06106
1975 Russolillo, Gary Edward, 10 Woodland 06105
1953 Ryan, Willaim Francis, Jr., 104 Gillett 06105
1951 Sachs, Julius Johnson, 60 Gillett 06105
1963 Sadowski, Joseph Stanley, 1000 Asylum Ave. 06105
1973 Salerno, Nicholas Richard, Mt. Sinai Hospital 06112
1976 Salgado, Arcadio Garde, 500 Blue Hills Ave. 06112
1956 Saltzman, Seymour Harold, 60 Gillett 06105
1978 Sassano, Felix Gerard, 85 Jefferson 06106
1973 Satlof, David M., 21 Woodland 06105
1963 Sayers, John Henry, 660 Prospect Ave. 06105
1937 Sayers, John Joseph, 865 Park 06106
1978 Schnatz, J. David, 114 Woodland 06105
1973 Schwartz, Louis, 50 Gillett 06105
1972 Schweizer, Robert Thomas, 85 Jefferson 06106
1940 Scoville, William Beecher, 85 Jefferson 06106
1952 Scull, Edward, 85 Jefferson 06106
1977 Secor, Ralph Calvin, 140 Garden 06112
1957 Seide, Morris J., 85 Jefferson 06106
1948 Seigle, Stewart Pinnell, 85 Jefferson 06106
1973 Selcow, Jay Elliot, 85 Jefferson 06106
1975 Seneviratne, U. E., Mt. Sinai Hospital 06112
1952 Sennett, Edward Joseph, 114 Woodland 06105
1977 Serafini, Ferdinand Francis, St. Francis Hospital 06105
1942 Serbin, A. Frederick, 21 Woodland 06105
1960 Shafer, Myron Edward, 85 Jefferson 06106
1975 Shah, Suresh M., 500 Blue Hills Ave. 06112
1976 Shapiro, Howard Robert, Mt. Sinai Hospital 06112

1975 Shapiro, Ruben L., 100 Retreat Ave. 06106
1977 Shaw, Johanna, 85 Jefferson 06106
1970 Sheehan, George Dunn, 1000 Asylum Ave. 06105
1947 Sherwood, Paul M., 400 Washington 06106
1951 Shoukimas, John, 1000 Asylum Ave. 06105
1959 Sicklick, Elliot, St. Francis Hospital 06105
1974 Sigman, Robert Lewis, 85 Jefferson 06106
1954 Siker, Estelle, 23 Colebrook 06112
1975 Silk, Mark R., 140 Woodland 06105
1971 Silver, Herbert, 80 Seymour 06115
1973 Silverstein, H. Robert, 1000 Asylum 06105
1976 Slavin, James Dennis, Jr., St. Francis Hospital 06105
1968 Slover, William Pyle, Jr., 85 Jefferson 06106
1965 Smith, Jay, R. V., 85 Jefferson 06106
1956 Smith, Leonard Kelley, 1000 Asylum 06105
1944 Smith, W. Leslie, 100 Retreat Ave. 06106
1966 Soares, Manuel Joseph, 151 Farmington Ave. 06115
1943 Solomon, Rebecca Zinsher, 85 Jefferson 06106
1977 Soroka, Alan, 1000 Asylum Ave. 06105
1963 Speer, Christopher S., 85 Jefferson 06106
1977 Sperling, David A., 400 Washington 06106
1951 Spillane, Richard, 100 Retreat Ave. 06106
1977 Spitz, Jerold Burton, 100 Retreat Ave. 06106
1941 Sponzo, James Joseph, 3 Webster 06114
1975 Springer, Thomas Duane, 60 Gillett 06105
1952 Stack, William J., 566 Prospect Ave. 06105
1963 Stavola, John Joseph, 78 Retreat Ave. 06106
1946 Steege, Theodore Walter, 85 Jefferson 06106
1962 Stent, Philip Anthony, St. Francis Hospital 06105
1949 Steven, Ranald James, 85 Jefferson 06106
1975 Stevens, Thomas J., 60 Gillett 06105
1974 Stoughton, Peter Van Cortlandt, Hartford Hospital 06115
1976 Straub, J. John, 85 Jefferson 06106
1971 Streeto, James Michael, 85 Jefferson 06106
1977 Sullivan, Kenneth Peter, 1000 Asylum Ave. 06105
1975 Sullivan, Paul R. C., 100 Retreat Ave. 06106
1957 Swain, Edward Bruce, 85 Jefferson 06106
1977 Swan, Patrick Francis, 114 Woodland 06105
1957 Sweet, Elliott Boyd, 85 Jefferson 06106
1948 Swett, Norris Poole, 1 Tower Sq. 06115
1977 Sylvan, Richard L., Mt. Sinai Hospital 06112
1974 Takata, Hiroyoshi, 85 Jefferson 06106
1970 Taylor, Peter Thurston, 85 Jefferson 06106
1957 Thaw, Benjamin Dows, 1039 Asylum Ave. 06105
1949 Thayer, John Ernest, 114 Woodland 06105
1957 Thomas, John B., 85 Jefferson 06106
1938 Tonken, Louis Clarence, 487 Farmington Ave. 06105
1975 Tortora, Michael James, 283 Collins 06105
1953 Trench, James McKeehan, 200 Retreat Ave. 06106
1957 Tripp, William Henry, 85 Jefferson 06106
1965 Trowbridge, Phillip E., 85 Jefferson 06106
1946 Tucker, Charles Albert, 100 Retreat Ave. 06106
1959 Tucker, Jolyon Simeon, 85 Jefferson 06106
1947 Turco, Vincent Joseph, 1000 Asylum Ave. 06105
1972 Tyrrell, David Perry, 85 Jefferson 06106
1933 Uricchio, Joseph George, 40 Wethersfield Ave. 06114
1963 Vance, Joseph Addison, III, Conn. Gen'l Life Ins. Co. 06115
1961 Vanderwerff, Jacob Anne, 750 Prospect Ave. 06105
1960 Veeder, Raymond, 200 Retreat Ave. 06106
1977 Velez, Eduardo M., Mt. Sinai Hospital 06112
1952 Vernlund, Robert James, 85 Jefferson 06106
1950 Waltman, Irving, 85 Jefferson 06106
1937 Walton, Loftus Linwood, 85 Jefferson 06106
1976 Wand, Martin, 100 Retreat Ave. 06106
1955 Ward, Kenneth Eaton, Conn Gen'l Life Ins. Co. 06105
1950 Wardner, LeRoy Hamilton, 85 Jefferson 06106
1965 Warner, Allen, 85 Jefferson 06106
1964 Waterman, William Bullock, 151 Farmington 06115
1966 Watson, H. Kirk, 85 Jefferson 06106
1946 Wawro, N. William, 85 Jefferson 06106
1943 Weiner, Sylvia, 99 Pratt 06103
1976 Welch, John Paton, 85 Jefferson 06106
1955 Welhaven, Arne, 100 Retreat Ave. 06106
1948 Wells, Gideon Robbins, 21 Woodland 06105
1976 Wells, John B., 85 Jefferson 06106
1976 Wells, Kenneth Hubert, 85 Jefferson 06106
1977 Weltman, Richard B., 500 Blue Hills Ave. 06112
1963 Westcott, Jack Lawrence, 85 Jefferson 06106
1954 Wetstone, Howard Jerome, Hartford Hospital 06115
1974 Wheeler, Maynard Boynton, 100 Retreat Ave. 06106
1938 Whitcomb, Benjamin Bradford, 85 Jefferson 06106
1938 White, Benjamin Vroom, 85 Jefferson 06106
1960 White, Kenneth Howard, Jr., 60 Gillett 06105
1958 Whitehead, David Earle, Hartford Hospital 06115
1965 Wieche, Donald Richter, 85 Jefferson 06106
1951 Wiese, Chester Albert, Hartford Hospital 06115
1948 Wiesel, Benjamin, 85 Jefferson 06106
1962 Wilcox, David Sanborn, 100 Retreat Ave. 06106
1958 Williams, Henry M., 80 Seymour 06115
1930 Wilson, William Augustus, 841 Asylum Ave. 06105
1969 Winalski, H. Paul, 114 Woodland 06105
1959 Wolf, Arthur Dale, 85 Jefferson 06106
1959 Wolfson, S. Steven, 21 Woodland 06105
1976 Woo, Sybil Wong, 100 Retreat Ave. 06106
1933 Wood, Frank Oliver, 85 Jefferson 06106
1962 Woodhouse, Robert William, 85 Jefferson 06106
1949 Woodruff, John Harrison, 85 Jefferson 06106
1977 Yeager, David L., 1000 Asylum Ave. 06105
1947 Zarkin, Oscar Howard, 44 Whitney 06105
1959 Zeller, William Webb, 200 Retreat Ave. 06106
1970 Zelman, Marvin, 85 Jefferson 06106
1973 Zeman, Peter Michael, 200 Retreat Ave. 06106
1948 Zimmerman, Leon Ward, 100 Retreat 06106
1970 Ziter, Fred M. H. Jr., 85 Jefferson 06106
1961 Zmijeski, Charles Jr., 1000 Asylum Ave. 06105

KENSINGTON 06037

1948 Chotkowski, Ludmil Adam, 1143 Chamberlain Hwy.
1977 Devers, Thomas J., 9 High Rd.
1967 Leicach, Jorge, 19 Clover Hill Pl.
1965 Lopez, Raul E., 320 New Britain Rd.
1930 Matteis, Joseph Theodore, 142 Mooreland Rd.
1938 Perakos, George Peter, 9 High Rd.
1940 Rosahn, Paul Dolin, 206 Ellwood Rd.
1961 Sultar, Robert Stephan, 320 New Britain Rd.
1974 Toffolon, Edward Peter, 9 High Rd.

MANCHESTER

1972 Ahn, William B., 27 Wyneding Hill Rd. 06040
1953 Baldwin, W. Howard, 156 Waranoke Rd. 06042
1937 Barry, Joseph Charles, 156 Main 06040
1971 Benavides, Carlos Gonzalo, 320 Main 06040
1946 Besser, Edward Lambert, 17 Haynes 06040
1961 Braat, John Peter, 265 Ludlow Rd. 06401
1960 Breer, Robert Dunwoody, 17 Haynes 06040
1973 Burns, Daniel W., 191 Main 06040
1952 Butterfield, Robert Kenneth, R.F.D. No. 2, Box 72
1957 Caldwell, David Manchester, Jr., 26 Haynes 06040
1966 Campbell, Iain Gordon, 153 Main 06040
1963 Charendoff, Leo 320 Main 06040
1977 Chmielewski, Thomas David, 155 Main
1976 Claps, Richard James, 353 Main 06040
1957 Demko, Richard Michael, 29 Haynes 06040
1940 Diskan, Albert Elmer, 29 Haynes 06040
1963 Duke, Martin, 26 Haynes 06040
1958 Eddy, John Randall, 124 Timrod Rd. 06040
1977 Elazegui, Idillio A., 150 North Main
1971 Ferrari, Dudley Alfred, 36 Haynes 06040
1966 Fialkoff, Ruben, Manchester Memorial Hospital 06040
1965 Flanagan, Edward P., 20 Jean Rd. 06040
1926 Friend, Amos Edgar, 36 Haynes 06040
1972 Ghabrial, Sobhy L., 342 Main 06040
1973 Golkar-Sisani, Firooz, Manchester Hospital 06040

1958 Gram, Peter Basil, 36 Haynes 06040
1974 Grossman, Donald Steve, 341 Broad 06040
1963 Guardino, Joseph John, 1049 Main 06040
1954 Guinan, Don Allen, 153 Main 06040
1955 Hamilton, Charles Raymond, Jr., 153 Main 06040
1952 Healy, Thomas McLean, 257 East Center 06040
1965 Heimann, Walter Gad, 353 Main 06040
1949 Helfrick, Francis Woodrow, 257 East Center 06040
1976 Helfrick, Sylvia Merrill, 104 Haynes 06040
1970 Hendessi, Hossain, 320 Main 06040
1951 Herman, Ralph Scallon, Jr., 9 Sanford Rd. 06041
1950 Horton, Frank Hamilton, 17 Haynes 06040
1957 Horwitz, Melvin, 29 Haynes 06040
1944 Jacobson, Charles Edward, Jr., 172 East Center 06040
1972 Kahaner, Harvey Allen, 320 Main 06040
1957 Karns, Robert Earl, 353 Main 06040
1936 Keeney, Robert Raymond, Jr., 29 Haynes 06040
1969 Kim, Cyril K., 342 Main 06040
1971 Klipstein, Arnold Lloyd, 153 Main 06040
1972 Klipstein, Eve Adele, 153 Main 06040
1968 Krupp, Alan Fred, 26 Haynes 06040
1971 Kurien, V. Abraham, 29 Haynes 06040
1975 Kuru, Ranjit Layanande, 342 Main 06040
1950 Lehmus, Harold J., 56 Haynes 06040
1948 Lockward, Howard Jefferson, 44 Haynes 06040
1921 Lundberg, George Albin Ferdinand, 223 East Center 06040
1957 Lundberg, George Albin Ferdinand, Jr., 153 Main 06040
1953 Malone, Harold John, 153 Main 06040
1969 Meisner, Burton M., 320 Main 06040
1964 Milewski, Stanislaw Antoni, 191 Main 06040
1946 Miller, Gerard Roland, 17 Haynes 06040
1977 Mordavsky, Donald Francis, 341 Broad 06040
1950 Morrison, Donald William, 17 Haynes 06040
1951 Moyer, Winfield Tyson, Jr., 36 Haynes 06040
1977 Nieto, Ramon Alejandro, 56 Haynes 06040
1969 Nix, Harold Robert, 191 Main 06040
1963 Norman, Paul Stuart, 320 Main 06040
1974 Nosce, Luis Valdehuesa, 150 North Main 06040
1978 Nosce, Margarita Guanco, 150 North Main
1976 Passaretti, Michael, 36 Haynes 06040
1957 Pastel, Harvey, 257 East Center 06040
1969 Pet, Donald, 645 Birch Mountain Rd. 06040
1952 Platz, Joseph, 6 Bates Rd. 06040
1978 Posteraro, Anthony Francis Jr., 15 West Middle Tpke. 06040
1975 Purcell, Daniel Paul, 150 North Main 06040
1957 Roberts, Douglas James, Jr., 353 Main 06040
1975 Rodner, Robert D., 320 Main 06040
1971 Romeo, Stephen Gerard, 191 Main 06040
1977 Romero, Pedro, 29 Haynes 06040
1947 Rosen, Theodore, 808 Main 06040
1965 Rubin, Martin Lewis, 15 West Middle Tpke. 06040
1951 Rubinow, Merrill Benjamin, 320 Main 06040
1976 Saini, Om P., 257 East Center 06040
1951 Schardt, Walter Mallory, 191 Main 06040
1973 Shakibai, Ali, 153 Main 06040
1976 Sinatra, Stephen Thomas, 466 Woodland 06040
1960 Smith, Douglas Humbert, 153 Main 06040
1971 Smith, Samuel Goodale, 191 Main 06040
1956 Snyder, Herbert Leon, 353 Main 06040
1975 Sobin, Bruce A., 341 Broad 06040
1974 Song, Soonhi, 320 Main 06040
1957 Stanton, Robert Eugene, 153 Main 06040
1961 Sulick, Edward Joseph, 315 East Center 06040
1959 Sumner, Philip Edward, 191 Main 06040
1937 Sundquist, Alfred Bernhardt, 17 Haynes 06040
1976 Tan, Frederick S., 353 Main 06040
1971 Tehrani, Hossein Limoui, 320 Main 06040
1950 Thomas, Andrew Henry, 36 Haynes 06040
1974 Turek, Alice Jaros, Health Director c/o Town Hall 06040
1953 Walden, Robert Clarence, Jr., 17 Haynes 06040
1968 Wheeler, John Paul, 191 Main 06040
1970 Wickersham, C. Wendell, III, 44 Haynes 06040
1975 Zariphes, Constantine, 99 East Center 06040

MARLBOROUGH 06424

1965 Schreuder, Otis Blaine, South Rd.

NEW BRITAIN

1957 Ahrens, Lawrence Bernard, 300 Main 06051
1975 Balakrishna, Hanumanthaiah, New Britain General Hospital 06050
1978 Barr, G. Richard, 73 Cedar 06052
1952 Bayer, Alexander Eli, 233 Main 06051
1972 Bee, Rudolf W., 800 Corbin Ave. 06051
1957 Belkin, Joseph William, 40 Hart 06052
1948 Bellach, Harry, 300 Main 06051
1974 Belman, David Arthur John, 40 Hart 06052
1957 Bernstein, Abraham, 33 Lexington 06052
1959 Bernstein, Chester Murray, 233 Main 06051
1934 Bernstein, Dwight J., 1 Ten Acre Rd. 06052
1963 Blank, Gerald Issar, 601 Farmington Ave. 06053
1974 Blau, Jeffrey S., 40 Hart 06052
1930 Blogoslawski, Walter Joseph, 199 West Main 06052
1958 Bower, Russell Stanley, 73 Cedar 06052
1957 Bray, George Henry, 73 Cedar 06052
1927 Buol, Robert Stanley, 91 Ten Acre Rd. 06052
1961 Byer, Seymour, 40 Hart 06052
1975 Cavo, John William Jr., 40 Hart 06052
1964 Clapp, Paul, Grove Hill Clinic 06050
1945 Clarke, Harold Metcalf, 40 Hart 06052
1969 Cosentino, Robert Thomas, 300 Kensington Ave. 06051
1952 Crothers, Charles Henry, 300 Kensington Ave. 06051
1965 Crowley, Joseph William, 233 Main 06051
1963 Dalburg, Lewis Arthur, Jr., 300 Kensington Ave. 06051
1931 Darrow John Edward, 35 West End Ave. 06052
1962 Dinep, Martin, 18 Cedar 06052
1970 Doctoroff, Stephen John, 300 Kensington Ave. 06051
1960 Dorfman, George, 40 Hart 06052
1941 Dorian, Edward, 48 Roslyn Dr. 06052
1973 Dragon, Robert Edward, 73 Cedar 06052
1969 Dressler, David M., New Britain Gen. Hosp. 06050
1947 Dunn, Morris L., 300 Main 06051
1942 Eisenberg, Sidney Edwin, 33 Lexington 06052
1970 Enriquez, Alfonso Raymundo, 300 Kensington Ave. 06051
1976 Feinglass, Edward Joel, 40 Hart 06052
1963 Fenaughty, Richard W., 300 Kensington Ave. 06051
1969 Filewicz, Stanley Peter, 55 West Main 06051
1971 Folk, Joseph John, Grove Hill Clinic 06050
1960 Formica, Joseph J., 73 Cedar 06052
1978 Froeb, Richard Lee, 300 Kensington Ave. 06050
1974 Geoghegan, John William, 100 Grand 06050
1977 Giarnella, Ralph A., 40 Hart 06052
1974 Giertz, William Edward, New Britain Gen. Hosp. 06050
1974 Gladstone, Todd M., 73 Cedar 06052
1943 Greenblatt, Harold Joseph, 73 Cedar 06052
1974 Gryboski, Robert Andre, 30 Bank 06050
1964 Gryboski, William A., 73 Cedar 06052
1966 Harwin, S. Martin, 300 Kensington Ave. 06051
1962 Hawkes, Peter Harold Robert, 19 Bassett 06051
1951 Herr, Herbert Harvey, 300 Kensington Ave. 06051
1967 Hicks, Robert Edward, 70 West Main 06051
1974 Howard, Rufus Oliver, 300 Kensington Ave. 06052
1970 Jacobson, James J., 40 Hart 06052
1977 Johnson, Kenneth Thomas, 300 Kensington Ave. 06051
1957 Johnson, Samuel Ault, 300 Kensington Ave. 06051
1966 Johnson, Theodore Herbert, 300 Kensington Ave. 06051
1976 Kahn, Charles Sigmond, Grove Hill Clinic 06050
1951 Kaplan, Henry Morris, 73 Cedar 06052
1960 Kawecki, Witold, 165 West Main 06051

1978 Kelley, Patrick Alan, 40 Hart 06052
1972 Khan, Khurshid, 73 Cedar 06052
1970 Koch, Lawrence W., 40 Hart 06052
1972 Koops, Herbert J., 40 Hart 06052
1977 Kron, Steven S., New Britain Gen. Hospital 06050
1942 Lacava, John James, 73 Cedar 06052
1973 Lakin, Paul C., New Britain General Hospital 06050
1946 Larkin, John Charles, New Britain Gen. Hospital 06050
1946 Levine, Howard, New Britain Gen. Hospital 06050
1948 Livingston, William T., New Britain General Hospital 06050
1968 Lund, David Allan, New Britain Gen. Hospital 06050
1955 Madden, Thomas James, 100 Grand 06052
1957 Mandell, Julian, 40 Hart 06052
1952 Marsh, Alexander, Central Conn. St. Coll. 06051
1948 Martin, Edward, Grove Hill Clinic 06050
1977 Massi, James Leonard, 40 Hart 06052
1946 Mlynarski, Joseph Andrew, 73 Cedar 06052
1975 Moody, Peter Campbell, New Britain Gen. Hospital 06050
1969 Moss, Robert, 73 Cedar 06050
1970 Nelson, Rodger Keith, 300 Kensington Ave. 06051
1974 Noniewicz, Stanley John, 40 Edbert Dr. 06052
1968 Nourizadeh, Ali-Reza, 73 Cedar 06052
1956 Ohanesian, Jacob Harry, 40 Hart 06052
1938 Orbach, Egmont Julius, 81 West Main 06051
1973 O'Reilly, Hugh Edward, 73 Cedar 06052
1968 Owens, Guy, 40 Hart 06052
1938 Parlato, Harry Anthony, 55 West Main 06051
1944 Peck, Bernard Carl, 32 Park Pl. 06052
1976 Philips, Ellen S., New Britain Gen. Hospital 06050
1963 Pito, Vincent J., New Britain Gen. Hospital 06050
1939 Pola, William Edward, 41 Lexington 06052
1957 Rackcliffe, Robert Lockwood, 40 Hart 06052
1936 Resnik, Edward, 272 Main 06051
1962 Ringrose, Vincent Patrick, Jr., 73 Cedar 06052
1975 Roberts, Richard William, 300 Kensington Ave. 06051
1964 Root, Howard Frank, Jr., New Britain Gen. Hospital 06050
1970 Samson, Donald Walter, 300 Kensington Ave. 06051
1930 Schechtman, Charles Theodore, 73 Cedar 06052
1954 Scheer, Edward Harold, 40 Hart 06052
1973 Scholand, Joseph Francis, 300 Kensington Ave. 06051
1931 Schupack, Samuel David, 38 Mason Dr. 06052
1938 Scully, Roger Tehan, 469 Lincoln 06052
1977 Shafi, Ijaz, 40 Hart 06052
1964 Sharon, Henry Joseph, 40 Hart 06052
1962 Sirkin, Robert Benjamin, 300 Kensington Ave. 06051
1975 Sittambalam, Earle J., 300 Kensington Ave. 06050
1955 Slater, Gregory S., 40 Hart 06052
1930 Slysz, Ladislaus Bernard, 247 West Main 06051
1970 Solano, Humberto, 300 Main 06051
1977 Spar, Ira Lawrence, 55 W. Main 06051
1936 Squillacote, Vincent Joseph, 30 Lyle Rd. 06053
1974 Steckler, Jeffrey Brandeis, 233 Main 06051
1961 Stewart, William Errol Louis, 327 West Main 06052
1975 Stier, Steven, 100 Grand 06050
1973 Swartz, George J., 300 Kensington Ave. 06051
1956 Taylor, Daniel Morse, 300 Kensington Ave. 06051
1962 Thomas, Richard John, 40 Hart 06052
1978 Toor, Arif A.A., 29 Park Pl. 06052
1976 Toor, Nasim F., 29 Park Pl. 06052
1941 Trapp, Francis W., 55 West Main 06051
1975 Ulreich, Sidney, New Britain Gen. Hosp. 06050
1967 Visnauskas, John William, 83 Vine 06052
1962 Waskowitz, William Jay, 40 Hart 06052
1965 Waugh, Robert Edmund, New Britain Gen. Hosp. 06050
1957 Wehrli, Adolph, 300 Kensington Ave. 06051
1973 Welna, Joseph A., 73 Cedar 06052
1948 Wesoly, Andrew Stanley, 27 Grove Hill 06052
1932 White, John Cowles, 300 Kensington Ave. 06051
1964 Wilson, James Miller, 300 Kensington Ave. 06051
1954 Winship, Granville Montgomery, Grove Hill Clinic 060
1948 Wolfson, Samuel, 15 Coolidge 06052
1950 Wright, Ralph C., 300 Kensington Ave. 06051
1948 Yannello, Mario Humbert, 520 Shuttle Meadow Ave. 06052
1966 Zaccheo, Thomas Joseph, 300 Kensington Ave. 06051
1965 Zembko, Andrew Francis, 73 Cedar 06052

NEWINGTON 06111

1952 Callahan, James Lawrence, 24 Walsh Ave.
1962 Cocilovo, Vincenzo, Cedarcrest Hospital
1950 Cohen, Benjamin, Newington Children's Hospital
1938 Curtis, Burr H., 181 East Cedar
1974 Drennan James Cyril, 181 E. Cedar
1975 Fazzari, Patrick Joseph, 181 E. Cedar
1935 Fenney, Philip William, Veterans Administration Hospital
1949 Flynn, Frederick, Newington Children's Hospital
1946 Friedberg, Isadore Hirsh, 93 Market Sq.
1977 Gage, James Randolph, Newington Children's Hospita
1957 Gold, Howard Carl, 24 Walsh Ave.
1976 Klauber, George Thomas, 181 East Cedar
1973 Kramer, Robert Allyn, Newington Children's Hospital
1977 MacGilpin, Douglas Harrington, 1268 Main
1975 O'Neil Vincent Danforth, 72 Southwood Rd.
1971 Ozonoff, Maer B., Newington Children's Hospital
1952 Pierce, John Archer, 181 East Cedar
1977 Renshaw, Thomas S., 181 E. Cedar
1977 Russman, Barry Sheldon, Newington Children's Hosp.
1972 Scheig, Robert Lee, Veterans Administration Hosp.
1957 Wolfson, Herman, 142 Market Sq.

PLAINVILLE 06062

1975 Collins, Conrad Douglas, 100 East Main
1943 Iannotti, John Pasquale, 78 Whiting
1976 Ill, Katherine Cooke, 29 Park
1964 Saltzman, Marvin, 29 Park
1962 Yannios, James Nicholas, 73 East Main
1956 Zebrowski, Edward Julian, 120 West Main

PLANTSVILLE 06479

1937 Connor, George Michael, 964 South Main

ROCKY HILL 06067

1973 Agarwal, Chandra Kumar, Veterans Hospital
1954 Benkovich, Geza O., C419 Century Hills, 300 Cold Spring Rd.
1978 Maray, Hugh Z., 287 West
1973 Ranganathan, Vasudeva, Veterans Hospital
1946 Walker, Donald Albert, 2051 Silas Deane Hwy.

SIMSBURY 06070

1977 Bason, Richard Henry, 720 Hopmeadow
1978 Bradley, Johnnie York, 14 Richard Rd.
1974 Buonomano, Ronald John, 930 Hopmeadow
1977 Cannon, John L., 720 Hopmeadow
1965 Hampton, Walter Richard, 930 Hopmeadow
1973 Hashmi, Ali I., 11 Banks Rd.
1974 Himmelsbach, Richard Karl, 132 Firetown Rd.
1973 Johnston, Janice J., 720 Hopmeadow
1976 Josephson, Ronald Paul, 374 Hopmeadow
1966 Keating, Stanley John, 34 Beldenwood Rd.
1965 Lewis, Garner Lennon, 720 Hopmeadow
1925 Murphy, Owen Lee, Canal
1964 Scudder, Walter Tracy, 720 Hopmeadow
1968 Sherman, Stephen Huntington, 13 Hopmeadow
1941 Shull, John Coulter, 2 Redstone Dr.
1976 Spada, Daniel Louis, Sr., 720 Hopmeadow
1977 Zemel, Lawrence, 1300 Hopmeadow

SOUTHINGTON 06489

958 Alfonsi, Ambrose A., 70 Berlin Ave.
955 Arcano, Joseph Timothy, 201 Main
973 Blumer, Arthur T., 98 Main
977 Brown, Garry Massey, 25 Berlin Ave.
964 Browne, Harry Herbert, 25 Berlin Ave.
949 D'Angelo, Anthony James, 94 Center
949 D'Angelo, Eugene Joseph, 94 Center
976 Diana, Perin William, Jr., 17 Meriden Ave.
935 Dudac, Thomas William, 98 Main
933 Gura, George Michael, 76 Main
973 Heap, Lewis Derek, Bradley Memorial Hospital
976 Jamharian, Jan, Bradley Memorial Hospital
975 Kaplan, Joseph Ross, Bradley Memorial Hospital
974 Mertz, James Joseph, Bradley Memorial Hospital
978 Noonan, J.P. Augustine, 35 N. Main
978 Sohn, Choong Sung, 231 Main
973 Somogyi, Balazs Bela, 98 Main
947 Stetson, Harold Prescott, 101 North Main

SOUTH WINDSOR 06074

968 Gutkowski, Thaddeus John, 1700 Ellington Rd., P.O. Drawer B
933 Houle, Raymond Theodore, 564 Main
977 Jarvis, Peter Arthur, 152 Bayberry Trail
958 McGann, Desmond Martin, 658 Ellington Rd., P.O. Box 584

SUFFIELD 06078

938 Coates, S. Paul, 32-C Harmon Dr.
959 Zaczynski, Edward Joseph, 150 Hill

THOMPSONVILLE 06082

937 Bloom, David Irving, 128 Pearl
957 Czaja, Ronald Joseph, Hazard Ave.
937 Dignam, Bernard Stephen, 133 Pearl
966 Gfeller, Robert John, Enfield Professional Center
938 Gourlie, Howard Wallace, 5 Riverview
950 Johnson, Carl Wentworth, 11 North Main
975 McGuane, Richard M., 82 South Rd.
960 Schear, William Augustine, Hazard Ave.

UNIONVILLE 06085

955 Austin, G. Lawrence, Jr. 23 Sycamore La.
977 O'Connor, Frederick Vincent, 10 School
977 Sylvester, Stanley Russell, 10 School
972 Woolfson, Arthur Ervin, 36 Main

WEST HARTFORD

944 Allen, Mary Mazner, 80 South Main. 06107
949 Allen, Roy, 15 North Main 06107
955 Altenberg, Henry Edward, 2668 Albany Ave. 06117
973 Amato, Joseph Alfred, 720 Farmington Ave. 06119
966 Anderson, Albin Stephen, 17 Drury Lane 06117
932 Arons, Milton Robert, 127 Mohegan Dr. 06117
975 Balazs, Denes Vilmos, 1043 Farmington Ave. 06107
947 Barbour, Charles Manson, Jr., Wyngate Lane 06107
940 Barker, Norman John, 5 Forest Hills La. 06117
973 Berkley, Richard Bruce, 8 Lowell Rd. 06119
972 Blakeslee, Sister Mary Helene, 27 Park Rd. 06105
947 Bowen, Francis Dorsey T., 45 Sedgwick Rd. 06107
967 Brewer, Sybille von Lindeiner, 109 Pioneer Dr. 06117
972 Brodey, James Franklin, 854 Farmington Ave. 06119
947 Campbell, Robert Harold, 28 Ranger La. 06117
929 Carroll, James Edward, 250 Griswold Dr. 06119
933 Cenci, Vincent Peter, 854 Farmington Ave. 06119
922 Clason, Freeman Pell, 40 West Hill Dr. 06119
960 Conroy, John Thomas, 46 Sunrise Hill Dr. 06107
953 Conway, Mark, 125 LaSalle Rd. 06107
1976 Costantini, Louis, 801 Farmington Ave. 06107
1967 Cullen, Mary Teresa, 27 Fernwood Rd. 06119
1928 Cushman, Laurence Arnold, 19 Brunswick Ave. 06107
1940 D'Ambruoso, Dominic Charles, 30 Glen Hollow 06117
1962 David, Nasser David, 290 Park Rd. 06119
1938 Donovan, William Francis, 798 Farmington Ave. 06119
1977 Donshik, Peter, C., 41 N. Main 06107
1937 Downer, Muriel Case, 17 Stratford Rd. 06117
1942 Duksa, Walter Joseph, 113 Bainbridge Rd. 06119
1938 Durkee, Ralph Everett, Jr., 85 Brookside Dr. 06107
1953 Earle, Lyon Hooper, Jr., 16 Sunset Ter. 06107
1960 Ehrlich, Eugene L., 54 Lovelace Dr. 06117
1952 Emmel, Robert Cortland, 61 South Main 06107
1941 Feeney, Thomas Michael, 4 Sunset Ter. 06107
1958 Felber, John Hans, 61 South Main 06107
1977 Felsenfeld, Herbert William, 80 So. Main 06107
1932 Filson, Ralph Marshall, 1028 Farmington Ave. 06107
1943 Fleisch, Milton Carl, 80 South Main 06107
1965 Fons, Anthony Ludwig, III, 345 North Main 06117
1968 Foster, Kendall Wilson, Jr., 41 Westminster Dr. 06107
1975 Fote, John Joseph, 820 Farmington Ave. 06119
1925 Fox, James Charles, Jr., 26 Westmoreland Dr. 06117
1952 Frank, Ludwig Mathias, 801 Farmington Ave. 06119
1957 Friel, Patrick Brendan, 801 Farmington Ave. 06119
1972 Gabrielle, Fred Michael, 820 Farmington Ave. 06119
1967 Gambarini, Alberto Jose, 19 Maiden La. 06117
1972 Gerber, William Hermann, 61 South Main 06107
1953 Gerent, Walter Paul, 115 Meadow Lane 06107
1975 Gionfriddo, Joseph Robert, 845 Mountain Rd. 06117
1960 Goldenberg, Arnold, 1260 New Britain Ave. 06110
1950 Gordon, Yale, 10 Princeton 06110
1958 Graffagnino, Paul N., 66 Uplands Dr. 06107
1939 Hall, Wendell Charles, 84 Brace Rd. 06107
1953 Hamilton, George Livingstone, Jr., 43 Sulgrave Rd. 06107
1959 Henken, Ernest Marvin, 57 Pilgrim Rd. 06117
1931 Hennessy, James Joseph, 14 Forest Hills Dr. 06117
1946 Hepburn, Robert Houghton, 91 Pioneer Dr. 06117
1958 Hill, John M., 61 South Main 06107
1934 Hirschfeld, Otto Max, 15 Arden Rd. 06117
1930 Holtz, Raymond Sidney, 16 Mt. Farms Rd. 06117
1965 Hosking, Wayne Frederick, 31 Rillbank Ter. 06107
1954 Houlihan, John Joseph, 125 LaSalle Rd. 06107
1963 Howe, George O., 696 Mountain Rd. 06117
1977 Jacobs, Henry Eli, 65 LaSalle Rd. 06107
1941 January, Derick Algernon, 94 Walbridge Rd. 06119
1942 January, Mildred Hartshorn, 94 Walbridge Rd. 06119
1959 Josel, Mark, 65 LaSalle Rd., 06107
1935 Kaschmann, Joseph, 1118 Trout Brook Dr. 06119
1966 Kenny, William Joseph, 108 Steele Rd. 06119
1946 Kirsch, Neville, 61 South Main 06107
1946 Klein, Joseph, 779 Prospect Ave. 06105
1969 Kurland, Morton David, 125 LaSalle Rd. 06107
1953 Leeds, William Gerard, 818 Farmington Ave. 06119
1942 Lenehan, J. Richard, 10 Dale 06107
1953 Lipton, Harold, 799 Prospect Ave. 06105
1937 Lischner, Moses David, 3 Lawler Rd. 06117
1964 Livingston, Robert, 1329 Boulevard 06119
1956 MacKinnon, Ian, 61 South Main 06107
1919 Maislen, Samuel, 887 Farmington Ave. 06119
1955 Maloney, Richard Harrington, 801 Farmington Ave. 06119
1931 Mancoll, Morris Max, 285 No. Quaker La. 06119
1949 Mann, Norman Morton, 65 LaSalle Rd. 06107
1953 Marsh, Raymond Randolph, 10 Arapahoe Rd. 06107
1959 Marshall, Lois Foster, 53 Westmont 06117
1935 Martin, John Garthwaite, 1064 Farmington Ave. 06107
1974 Menzer, Alexander, 779 Farmington Ave. 06119
1961 Milyko, Alexander Busch, 61 South Main 06107
1969 Morhardt, Charles Edwin, 77 South Main 06107
1969 Moskowitz, Harold, 14 Arlan Way 06117
1935 Murphy, Thomas Francis, 144 Pioneer Dr. 06117

1973 Nathanson, Robert Bennett, 61 So. Main 06107
1928 O'Connell, Maurice Francis, 17 Westwood Rd. 06117
1973 O'Connell, Paul Benedict, 20 Glen Hollow 06117
1975 Perlman, Adele Maiman, 19 Timrod Rd. 06107
1934 Preston, Thomas R., 119 Bainbridge Rd. 06119
1923 Rankin, Bertrand Fred, c/o P. Rankin, 35 Gifford Rd. 06119
1951 Rankin, Clair, 1329 Boulevard 06119
1963 Rentz, Robert Edward, 1102 Farmington Ave. 06107
1930 Reynolds, Robert Gardner, 31 Holbrook Rd. 06107
1976 Rixon, John D., 45 South Main 06107
1960 Rogers, Henry Crampton, 81 South Main 06107
1924 Root, Maurice Timothy, 51 North Main 06107
1935 Root, Sophie Andrews, 51 North Main 06107
1972 Rosenkranz, Barry Martin, 639 Prospect Ave. 06105
1956 Rothstein, Isadore, 90 Haynes Rd. 06117
1975 Rudnick, Robert David, 126D New Britain Ave. 06110
1921 Russell, G. Gardiner, 118 Steele Rd. 06119
1977 Sarter, Horace, 61 South Main 06107
1947 Schatten, Siegfried Sylvester, 1157 New Britain Ave. 06110
1975 Schipke, Raymond E., 785 Farmington Ave. 06119
1949 Schloss, Walter Amson, 31 Brookside Blvd. 06107
1971 Schuster, Harvey Stuart, 41 North Main 06107
1946 Schwartz, Herbert Norman, 1823 Asylum Ave. 06117
1966 Scully, Harold Francis, 29 Winterset Lane 06117
1975 Sereny, Peter, 1043 Farmington Ave. 06107
1975 Shea, William Patrick, III, 8 Lowell Rd. 06119
1964 Shelton, Philip Arthur, 41 North Main 06107
1964 Smith, Jay Donald, 10 Princeton 06110
1952 Smith, Lillian A., 44 Hartwell Rd. 06117
1939 Smith, Wilson Fitch, 795 Prospect Ave. 06105
1937 Spekter, Louis, 87 Mohawk Dr. 06117
1927 Standish, E. Myles, 11 Greenridge Lane 06107
1935 Standish, Hilda Crosby, Greenridge Lane, Sunset Farm 06107
1976 Swartz, Alan Nils, 1124 New Britain Ave. 06110
1962 Tadeo-Goldman, Josephine A., 38 Visgrove Lane 06117
1971 Taylor, William R., 81 South Main 06107
1939 Tennant, Robert, 30 Ten Acre Lane 06107
1923 Van Kleeck, Euen, 53 Concord 06119
1940 Walker, Robert, 10 Flagstad Rd. 06107
1973 Wasserman, Herbert E., 1005B Farmington Ave. 06107
1936 Weissenborn, Walter, 16 Vera 06119
1957 Welch, Edmund Thomas, Jr., 5 Manor Lane 06107
1920 Weld, Stanley B., 15 Gloucester Lane 06107
1973 Wells, Jean, 1005 Farmington Ave. Plaza 06107
1946 White, Edward Philip, 41 Riggs Ave. 06107
1941 Wineck, Morris Samuel, 11 Eastwood Rd. 06117
1934 Winters, John Thomas, 10 Dale 06107
1922 Wright, William Witter, 200 Fern 06119
1948 Zeldis, Norman, 21 Tanglewood Rd. 06117

WEST SIMSBURY 06092

1974 Dimlich, H. Karl, 41 Madison La.
1951 Hockmuth, Lloyd Norton, 204 W. Ledge Rd.

WETHERSFIELD 06109

1956 Agee, Fred Benson, Jr., 51 Westway
1974 Braren, Carl Henry, 463 Wolcott Hill Rd.
1968 Callan, John P., 425 Coppermill Rd.
1938 Carvey, Edward Vincent, 121 Broad
1948 Cavalieri, Rinaldo Joseph, 454 Highland
1937 Fagan, Francis Xavier, 147 Wells Farm Dr.
1960 Foote, Franklin M., 4 Round Hill Rd.
1936 Gallivan, John Norman, 951 Ridge Rd.
1976 Gazi, Golam Rosul, 415 Silas Deane Highway
1954 Giosa, Nicholas, 463 Brimfield Rd.
1952 Golden, Archie James, 91 Hillcrest Ave.
1946 Hellijas, Carl Sylvester, 4 River Rd.
1953 Johnston, J. Howard, 522 Wolcott Hill Rd.
1934 Keefe, Raymond Starkey, 304 Church
1958 Kessel, Leizor, 183 Spring
1949 Murphy, Robert Daniel, 5 Cottwell Dr.
1967 O'Brien, James Edward, 31 Surrey Drive
1961 Pace, Silvio Fernando, 63 Wells Rd.
1960 Pierce, John Arthur, 11 Golf Rd.
1976 Pope, Frederick Joseph, 239 Silas Deane Highway
1964 Powell, Nancy Rolick, 473 Wolcott Hill Rd.
1960 Ryan, William Donovan, 229 Maple
1923 St. John, Leopold Albert, 415 Silas Deane Highway
1950 St. John, Nicholas E., 375 Ridge Rd.
1932 Storms, William Frederick, 25 Old Smithy La.
1962 Turner, Wallace Wilder, 102 Clovercrest Rd.
1937 Twaddle, Paul Holmes, 430 Church
1978 Wilmer, Edward Pancoast, 135 State

WINDSOR 06095

1958 Britting, John Anthony, 697 Poquonock Ave.
1975 Chowdhury, Muzibul Gani, 150 Poquonock Ave.
1949 Donohue, Stephen Michael, 525 Windsor Ave.
1967 Ford, James Raymond, 697 Poquonock Ave.
1959 Granville, Norma Belle, 126 Clover
1956 Hamblin, Wolcott Chaffee, 342 Park Ave.
1957 Keefe, Raymond Bernard, 697 Poquonock Ave.
1930 MacCready, William Harold, 3 Orchard Lane
1955 Mack, Daniel Elliott, 74 Mack
1957 Murphy, Edward Francis, 1000 Prospect Hill Rd.
1975 Paslawski, Walter, 93 Long Hill Rd.
1975 Pattillo, James Gilchrist, 74 Mack
1947 Poirier, Theophane M., 26 Maple
1958 Pullen, Richard Donald, 74 Mack
1950 Silliman, Warren B., 26 Prospect
1964 Tummillo, Mary Anne, 924 Windsor Ave.
1975 Velie, William Milner, 74 Mack

WINDSOR LOCKS 06096

1978 Balazs, Dezso Adam, 482 Spring
1930 Byrne, David W., 412 Elm
1952 Eilbergas, Michael, 403 Halfway House Rd.
1948 Kennedy, John Joseph, Jr., 50 Church
1964 Wehr, Robert, 326 South Center

OUT OF COUNTY

1952 Abbot, Frank Kimball, 341 Laurel Grove Rd., Middletown 06457
1957 Bachman, John Presly, 233 Prospect, Chateau LaJolla LaJolla, California 92037
1955 Barry, Robert Torney, Craigville Beach Rd., Wes Hyannisport, Mass. 02672
1946 Baskin, Abraham Hyman, P.O. Box 620, Westbrook 0649
1933 Bausch, Carl Philip, 76 Cliff Rd., Nantucket, Mass. 0255
1932 Benoit, Raoul Joseph, 209 Rosary Rd., Clearwater, Florid 3351
1951 Brandriss, Joseph, 4720 Pinetree Dr., Miami Beach, Florida 33140
1939 Brewer, Francis, 711 Avila Pl., El Cerrito, California 9453
1954 Bucknam, Frank Gilbert, Romerstrasse 136D, 690 Heidelberg, West Germany
1973 Bundy, Edward Stillman, Meriden Hospital, Meriden 06450
1958 Burke, Gerald Francis, Middlesex Memorial Hospital, Middletown 06457
1965 Bush, Hubert Sutton, Jr., 57 Union, Rockville 06066
1951 Canzonetti, Andrew Joseph, Scovill Mfg. Co., Waterbury 06706
1947 Carey, Thomas B., 221 N.E. 15th, Delray Beach, Florida 33444
1964 Carr, Michael Francis, 25 Chestnut Ct., Cromwell 06410
1961 Casey, Edward James, 1641 Colden Ave., Bronx, New York 10462
1946 Clark, Bliss Bartlett, Santa Anita Club DeGolf, Apartado Postal 31-9, Guadalajara 5, Mexico

1965 Colliton, Robert John, 34 Oakmoor Dr., Vernon 06066
1933 Corcoran, Michael A., Ridgeview Rest Home, Cromwell 06416
1943 Crispin, Maximilian A., 1411 N. Flagler Dr., West Palm Beach, Florida 33401
1946 Desmond, Charles T., 12-134th, Apt. 408, Ocean City, Maryland 21842
1969 Dunne, Michael Joseph, 9013 Beatty Dr., Alexandria, Virginia 22308
1947 Ebers, Theodore Martin, P.O. Box 821, Sedona, Arizona 86336
1942 Edson, Reginald Campbell, 963 Catalina Rd., St. Augustine Shores, Florida 32084
1943 Ellis, Lyle Gaffney, Sunset Ave., Rocky Mount, North Carolina 27801
1976 Ellsworth, Michael Hamilton, 255 Pomfret 06260
1933 Farland, Victor Louis, 3000 N. E. 56th Ct., Fort Lauderdale, Florida 33308
1975 Greenberg, Robert David, Vernor Prof. Building, Rt. 30, Vernon 06066
1967 Gutierrez, Teofilo Gregorio, Jr., Meriden Hospital, Meriden 06450
1969 Hoffman, Harry B., Yale-NH Hospital, New Haven 06504
1934 Horning, Benjamin Graham, Hostal Alameda, Calle Casas de Compos, 3 Malaga, Spain
1935 Hough, Perry Tyler, Parrsboro, Nova Scotia, Canada
1948 Jennings, Walter Forfar, 122 E. Shore Ave., Groton Long Point 06340
1951 Johnson, James C., Jr., 308 Main, Niantic 06357
1930 Kalett, Joseph, 2055 Gulf of Mexico Dr., Apt. 209, Sarasota, Florida 33577
1937 Katz, Dewey, 3457-A Bahia Blanca West, Laguna Hills, California 92653
1928 Laplume, Albert Antonio, 2806 N.W. 52nd Ct., Tamarac, Ft. Lauderdale, Florida 33309
1950 Lear, Harold A., 1170 5th Ave., New York, New York 10029
1936 Lewis, Samuel Donald, 1801 S. Flagler Dr., West Palm Beach, Florida 33401
1938 LoVetere, Angelo Arthur, 450 Old San Francisco Rd., Sunnyvale, California 94086
1965 Mara, Neil F., 117 Irene Dr., Vernon 06086
1969 Matthews, Lester G., 303 West Main, Freehold, New Jersey 07728
1937 McCue, Martin P., 473 Boston Post Rd., Waterford 06385
1934 McDermott, John Francis, 1434 Punahou, Arcadia Apt., Honolulu, Hawaii 96822
1934 Menousek, Joseph Albert, 270 Celestial Way, Juno Beach, Florida 33408
1947 Miller, Seymour M., 901 CieneQuitas Rd. Santa Barbara, California 93110
1973 Moon, Won Koul, Litchfield Hills Med. Ctr., Peck Rd. Torrington 06790
1954 Motyka, Stanley J., 10234 Holburn Dr., Huntington Beach, California 92640
1975 Nissanka, Manage D.S., Vernon Prof Bldg. Vernon (member Tolland City Also) 06066
1960 O'Connor, Luke Edward, 57 Union, Rockville 06066
1935 Papa, John Smith, 1950 N.E. 59th Pl., Fort Lauderdale, Florida
1930 Parshley, Philip Ford, Box 509, Pinehurst, North Carolina 28374
1952 Pepper, Dickerson Sergeant, 1414 Stony Circle, Gladwyne, Pennsylvania 19035
1930 Pullen, Richard Woollard, 675 Einsiedlerhof-Kaiserslautern, Kaiserstrasse 156 West Germany
1923 Robinson, Wilfred John, P.O. Box 7052, Christiansted, St. Croix 00820
1975 Romanos, Daniel Raymond, 94 Church, Torrington 06790
1953 Schwartz, Harold, 814 Ingleside Ave., Evanston, Illinois 60201
1977 Shukan, Donald C., 123 Dwight Rd., Longmeadow, Mass. 01106
1953 Stapor, Joseph John, 536 Gospel Lane, Orange 06477
1930 Steincrohn, Peter Joseph, 1430 Ancona Ave., Coral Gables, Florida 33146
1936 Stewart, Lester Quentin, 33 Erickson Way, South Yarmouth, Mass. 02664
1932 Talbot, Henry Pierce, 259 Shamrock Blvd., Venice, Florida 33595
1941 Tutles, Alexander James, 2780 Atlantic, #3, Melbourne Beach, Florida 32951
1957 Warren, David L., P H S Hospital, 6500 Hampton Blvd., Norfolk, VA. 23508
1931 Weisenfeld, Nathan, 1445 Tamiami Trail, Sarasota, Florida 33577
1976 White, Barry Ellis, 5 Turret Hill Way, Cheyney Hill, Willowdale M2H3A7, Ontario, Canada
1967 Zlotsky, Norman A., 23 Elm, Rockville 06066

Litchfield County Association

President: Donald H. Peters, Elizabeth, Kent 06757
President-Elect: Todd E. Anderson, Charlotte Hungerford Hosp., Torrington 06770
Secretary-Treasurer: Frank Lovallo, Sharon Med. Arts Ctr., Hospital Hill, Sharon 06069
Councilor: Todd E. Anderson Charlotte Hungerford Hosp., Torrington 06790
Associate Councilor: Robert W. Harkins, P.O. Box 449, Woodbury 06798
Annual Meeting, Second Tuesday in April
Semi-Annual Meeting, Second Tuesday in October

COLEBROOK 06021

1973 Fletcher, Robert G., Box 102
1957 Luchs, David, Schoolhouse Rd.
1967 Ragland, Stuart, Jr., Smith Hill Rd.

FALLS VILLAGE 06031

1946 Bornemann, Carl, Beebe Hill Rd.

HARWINTON 06790

1938 Kott, Joseph Henry, Cobble Rd.

KENT 06757

1966 Goss, John D. Jr., Macedonia Rd.
1946 Greiner, George Frederick, Kent School
1976 Marlow, Dorothy Jeannette, Box 339
1963 Peters, Donald Henry, Elizabeth

LAKEVILLE 06039

1945 Brewer, Alfred Edwin, Main
1966 Gott, Peter, Main
1968 Westsmith, Richard Alan, Main

LITCHFIELD 06759

1946 Chait, Sidney A. Tapping Reeve Village, Apt. 6-D
1946 Dautrich, Albert William, West
1966 MacMaster, Duncan Raymond, Prospect
1939 Warner, C. Norton, North

NEW HARTFORD 06057

1942 Markwald, Heinz Wolfgang, Main

1977 Schneiderman, William L., 1832, House, Main

NEW MILFORD 06776

1949 Baird, Robert Desmond, 30 Park Lane East
1973 Clark, Morris L., 17 Poplar
1963 Estrada, Julian Albert, New Milford Medical Building
1952 Ferris, Jeffrey, 62 Bank
1956 Happel, Elizabeth, 62 Bank
1957 Haxo, John Victor, 15 Old Park Lane Rd.
1938 Ignace, Stephen J., 65 Bridge
1976 Kamm, Harold John, 49 East
1973 Kavirajan, Vadakkekara, 15 Old Park Lane
1964 Lahvis, W. Frederick, P.O. Box 148
1975 Mabasa, Ramon Albar, 15 Old Park Lane Rd.
1949 Morrow, Howard S., 30 Elm
1971 Nagaraja, Urabagilu, 62 Bank
1978 Naqvi, Syed Zafer Hasnain, 17 Poplar
1975 Orlandi, Robert Joseph, 15 Old Park Lane
1947 Street, John M., P.O. Box 777
1977 Wagenbrenner, William Joseph, 29 Sherry Lane

NEW PRESTON 06777

1971 Abreu, Francisco B., R.F.D. #1
1973 Peck, Morgan Scott, Bliss Rd., R.F.D. 1

NORFOLK 06058

1937 Barstow, Richard Iddings, The Village Green
1975 Prouty, Robert L., Litchfield Rd.

NORTH CANAAN

CANAAN 06018

1935 Elliott, John Richard, Main

ROXBURY 06783

1964 McDonald, Robert L., Roxbury Falls Rd.

SALISBURY 06068

1943 Mackay, William D.
1955 Smith, Frank Edward, Jr., Main

SHARON 06069

1975 Brown, Malcolm Michael, Sharon Clinic
1973 Charde, John Patrick, Sharon Clinic
1968 Collins, Richard Neil, Sharon Clinic
1975 Colman, Neil D., Hospital Hill
1976 Cross, Valmore Francis, Sharon Hospital
1976 Donnelly, Walter, G. Jr., Hospital Hill
1972 Finkelstein, Jack, P.O.Box 566
1949 Fisher, Robert Lownds, Sharon Clinic
1962 Gallup, John William, Sharon Clinic
1947 Gevalt, Frederick C. Jr., Sharon Clinic
1942 Gudernatch, Gaert Steuerwald, Main
1975 Hajek, Joseph, Sharon Clinic
1949 Haydock, George Guest, Sharon Clinic
1975 Henisz, Anna Krystyna, Sharon Hospital
1959 Jensen, Philip B., Sharon Med. Arts Ctr., Hospital Hill
1960 Laning, George Michie, Morey Rd.
1973 Longstreth, George, Sharon Clinic
1951 Lovallo, Frank, Sharon Med. Arts Ctr., Hospital Hill
1969 Mirabile, Charles Samuel, Jr., Sharon Cinic
1953 Moore, Roger W., Sharon Clinic
1966 Reyelt, Walter Peter, Jr., Sharon Clinic
1975 Ryan, Robert H., Sharon Clinic
1974 Tesoro, Michael Richard, Main
1971 Tiedemann, Richard N., On-the-Green
1953 Waugh, David Darwin, New
1976 Weeks, Carnes, Jr., Sharon Hospital
1975 Wright, Ann B., White Hollow Rd.

SOUTH KENT 06785

1974 Mellisy, Andrew, Rt. 341 & South Rd.

TERRYVILLE 06786

1976 Beup, Leonardo Perez, 87 East Main
1951 Coral, Mark, 9 Maple
1958 Wasley, David L., 7 Elm

THOMASTON 06787

1946 Conklin, Clifford T. Jr., 16 Grand
1947 Samson, Daniel P., 147 Elm

TORRINGTON 06790

1970 Abbott, Jay Lewis, 106 Litchfield
1946 Adams, Arthur John, Charlotte Hungerford Hospital
1972 Anderson, Todd Edmund, Charlotte Hungerford Hospital
1976 Barrett, John Joseph, Charlotte Hungerford Hospital
1976 Blinkoff, Jack J., 49 Felicity La.
1966 Briggs, Robert Stewart, 30 Peck Rd.
1952 Brown, Freeman Fletcher, Jr., 540 Litchfield
1946 Buckley, John Littlefield, 148 Migeon Ave.
1950 Canniff, James Charles, 51 Main
1978 Coralli, Richard John, 30 Peck Rd.
1970 Curi Joseph F. J., Litchfield Hills Medical Center
1966 Danaher, Thomas H., 379 Prospect
1946 Fabro, J. Alfred, 94 Church
1961 Farrell, Henry Francis, Peck Rd.
1963 Finn, Alfred Joseph, Jr., 379 Prospect
1972 Finnie, Jerrold Nelson, 1185 New Litchfield
1970 Galloway, John Alexander, 106 Litchfield
1931 Giobbe, Michael Edward, 355 Prospect
1969 Glenn, John Spellman, 24 Church
1936 Goldberg, Isadore Soloman, 24 Church
1906 Griswold, Maude Taylor, Wolcott Ter.
1966 Gulliver, Ashbel Green, 1185 New Litchfield
1966 Heinrich, Ward Dittmar, 24 Church
1977 Hukill, Peter Briggs, Charlotte Hungerford Hospital
1949 Huvelle, Camille Henry, Peck Rd.
1954 Irwin, Joh Britton, 1185 New Litchfield
1947 Katzin, Benjamin, 30 Peck Rd.
1962 Kramer, Richard Thomas, 24 Mason
1973 MacDonald, Carlton A., Charlotte Hungerford Hospital
1978 Mactal, Josefina Agoncillo, 70 Windtree East
1975 Mactal, Josefino Alejandro, 540 Litchfield
1953 McKenna, James Francis, 379 Prospect
1952 Meunier, John Louis, 24 Church
1942 Mitchell, Gerald Vincent, 185 Albert
1971 Nesbitt, Kenneth A., Charlotte Hungerford Hospital
1977 Orgler, Gordon K., Torrington Co.
1938 Orlowski, Andrew Williams, 64 Belleview Ave.
1968 Pierce, John M., 199 Migeon Ave.
1966 Pimpinella, Ronald J., 30 Peck Rd.
1954 Polito, John Clarke, 24 Church
1975 Privitera, Joseph Henry, Charlotte Hungerford Hospital
1949 Robertson, Alexander Rocke, P.O.Box 1107
1932 Samponaro, Nicholas, 241 Main
1974 Sansing, James G., 185 Albert
1973 Scalice, Robert Angelo, 30 Peck Rd.
1978 Schildgen, Frank H., 69 Riverside Ave.
1976 Seleman, Alden Walter, Charlotte Hungerford Hospital
1947 Smith, James Thomas, 148 Migeon Ave.
1966 Smith, Reginald Donald, Charlotte Hungerford Hospital
1962 Vanoni, Frank Robert, 379 Prospect
1953 Walker, Thomas H., 30 Peck Rd.
1974 Whelchel, Lynn W., Jr., 30 Peck Rd.
1956 White, Fowler F., 180 Marcia Dr.
1975 Wilton, Robert Edward, (D.O.) 1185 New Litchfield

WASHINGTON 06793

1968 Fearon, Henry Dana, Washington Green
1958 Hays, David R. Jr.

WASHINGTON DEPOT 06793

1946 Simonds, John Rolf, Box 228

WATERTOWN 06795

1976 Bassford, William W., 57 DeForest
1946 Caney, Wilbur Hinds, 429 Main
1951 Goerner, Jessamine Roberta, 404 Main
1949 Martin, Katharine Hawley, Butternut Lane
1936 Meyers, Royal Abbott, 210 Guernseytown Rd.
1976 Tate, Curtis Eugene, 70 Heminway Park Rd.

WEST CORNWALL 06796

1947 Linder, James H., 280 Cornwall-Sharon Rd.

WINSTED 06098

1976 Berger, Ronald O., 71 Spencer
1969 Briggs, Harry Caldwell, 71 Spencer
1978 Brunn, Jr., Frederick M., 71 Spencer
1977 Capobianco, Lucian Francis, 16 Hinsdale Ave.
1936 Cornelio, Francis Joseph, 45 Elm
1965 Dutton, Richard Sanders, 71 Spencer
1977 Galland, Leopold D., 16 Hinsdale Ave.
1969 Gallo, Erly Paul, 26 Elm
1937 Gallo, Francis, Medical Arts Building
1977 Hamlin, Nason P., 71 Spencer
1962 Husvet, Ferenc, 71 Spencer
1954 Izumi, Ernest Matson, R.F.D. No. 1
1964 Kaess, Kenneth Richard, Winsted Memorial Hopital
1936 Levy, Aaron, 26 Elm
1971 Munch, Richard Valentine, 71 Spencer
1947 Reidy, Joseph Carey, 43 Walnut
1972 Sherman, Roy B., Flagg Hill Rd., R.F.D. 1
1969 Smith, Norman Eugene, Jr., 71 Spencer
1955 Tury, Leslie Akos, R.F.D. #1, Bunnell

WOODBURY 06798

1948 Cushman, George Lester, 2 White Oak Rd.
1978 Goodman, Daniel B., 2 White Oak Rd.
1967 Harkins, Robert William, P.O. Box 449
1976 Tuerk, Benjamin, Jr., Linden Rd.

OUT OF COUNTY

1972 Bernacki, Edward Joseph, United Tech. Corp., Hartford 06101
1938 Dobbs, William G. H., 1721 N. 74th Pl., C/O Chard, Scottsdale, Arizona 85257
1960 Dolan, Virginia Louise, 2866 Mayfield Rd., Cleveland Heights, Ohio 44118
1942 Downs, Elinor Fosdick, Stoneleigh, Alger Court, Bronxville, New York 10708
1931 Evarts, Josephine, Millerton, New York 12546
1948 Fowler, George A., 803 Camino Atalaya, Santa Fe, New Mexico 87501
1935 Kilgus, John Frank, Jr., Sunrise Dr., Avon 06001
1970 Montoni, Edward John, 5 Wintergreen La., West Simsbury 06092
1967 Niemann, Claus Peter, P.O. Box 74, Sherman 06784
1919 Reade, Edwin Godwin, 315 Knollwood Village, Southern Pines, North Carolina 28387
1939 Wilcox, Lloyd M., 124 Main, Bristol 06010
1967 Zeffiro, Ronald Gordon, 1844 Albany Ave., West Hartford 06117

Middlesex County Association

resident: **Patrick R. Concannon**, Wildwood Med. Ctr., Essex 06426
ice-President: **Kenneth M. Robbins**, 760 Saybrook Rd., Middletown 06457
ecretary-Treasurer: **Fredric I. Fischbein**, 80 South Main., Middletown 06457
ouncilor: **Herbert Magram**, 45 Crescent, Middletown 06457
Associate Councilor: **Benjamin M. Shenker**, 1251 South Main, Middletown 06457
Annual Meeting, Second Thursday in April
Semi-Annual Meeting, Second Thursday in October

CHESTER 06412

1977 Berman, Arnold M., 16-A King's Highway
1978 Van Nes, W. Gordon, 1 Winthrop Rd.
1954 Wheeler, Gordon Bartlett, Kings Highway, R.F.D. No. 1

CLINTON 06413

1974 Kerr, Robert John Noel, 37 Commerce

CROMWELL 06416

1963 Adams, Henry Alexander, 384 Main
1958 Cornett, Samuel James, 8 Woodlawn Dr.
1934 Couch, Frank Hallock, 32 Prospect Hill Rd.
1969 Crowther, Daniel F. S., 269 Main
1976 D'Amato, Raymond Lee, 269 Main
1940 Grant, Richard Francis, 482 Main
1972 Macionus, Raymond Francis, 269 Main
1928 Nelson, Walter Nathaniel, 360 Main
1977 Rutner, Alan, 16 Juniper Hill
1967 Waldman, Arthur Leslie, 269 Main

DEEP RIVER 06417

1939 Lobb, Russell Albert, 1 Essex
1974 Snyder, Elise W., Cedar Swamp Rd.

DURHAM 06422

1976 Bird, Kenneth Irving, Jr., Wildwood Rd.
1974 Sinnamon, Rita C., Creamery Rd.
1964 Voelkening, Burkland Wolfgang, Carriage Dr.

EAST HAMPTON 06424

1977 Green, Michael Stephen, 34 Barton Hill Rd.
1934 Soreff, Louis, 9 West High
1970 Thomas, John M., RR4, Town Farm Rd.

ESSEX 06426

1942 Ames, William Gard, 64A North Main
1972 Baldwin, David Bruce, Middlesex Tpke.
1971 Bardenheier, Joseph Alexander, Wildwood Med. Building
1967 Buebendorf, Donald Philip, Middlesex Tpke.
1975 Dwyer, Robert Dennis, Wildwood Medical Bldg.
1971 Goetcheus, John Stewart, Middlesex Tpke.
1977 Goff, Christopher Wallick, Middlesex Tpke.
1948 James, Walter Raymond, 64A North Main
1973 Maron, Theodore William, Jr., Middlesex Tpke.
1974 Pierson, Paul Starrett, 64 North Main
1974 Rowett, Dale A., Middlesex Tpke.
1954 Stanford, John, 64A North Main
1974 Tucker, Edward Spori, 64A North Main
1941 Twachtman, Eric, Plains Rd.

HADDAM 06438

1976 Montano, Charles, Harper's Landing

HIGGANUM 06441

1978 Blake, Arthur F., Rt. 9-A
1977 Borowski, John Valley Ridge Dr.
1972 Kilga, Lawrence A., Lt. Shubael Rd.
1948 Korab, John Joseph, High
1973 Pringle, Eleanor W., Killingworth Rd.
1978 Zeidler, William Henry, RTE. 9-A

KILLINGWORTH 06417

1951 Bauer, William Frederick, Jr., Fire Tower Rd.
1976 Greenaway, Michael D., RFD2, Box 71,

MARLBOROUGH 06447

1978 Tuttle, Mark, 306 Jones Hollow Rd.

MIDDLETOWN 06457

1973 Abad, Alex A., Connecticut Valley Hospital
1969 Adams, Richard, Shoreline Surgical Assoc., 195 South Main
1962 Arafeh, Mehadin Kamel, Connecticut Valley Hospital
1969 Arena, Anthony Joseph, 770 Saybrook Rd.
1952 Arnault, Donald George, 80 South Main
1976 Bernstein, Alan Elihu, 1251 South Main
1971 Bertuch, Albert William, 195 South Main
1976 Brown, Dewees Harold, 77 Crescent
1977 Brown, James, 80 South Main
1971 Buchalter, Daniel Joel, 103 South Main
1941 Buckley, Willard Emrich, 770 Saybrook Rd.
1977 Butt, Muhammed Tarig, 80 South Main
1975 Campbell-Jacobs, Richard M., 1251 South Main
1974 Catrini, Vincent Julian, 770 Saybrook Rd.
1969 Cerritelli, Dominick Henry, 45 Crescent
1963 Ceulemans, Cyril Peter, 770 Saybrook Rd.
1955 Chace, Charles Winslow, 760 Saybrook Rd.
1973 Clark, Samuel, Jr., 770 Saybrook Rd.
1942 Crampton, Clair Beebe, Wesleyan Univ.
1958 Daukas, Nicholas James, 124 Washington
1959 DeVille, Desmond Bancroft, 80 South Main
1977 Diamond, Eric Jeffrey, Middlesex Memorial Hospital
1972 Donadio, Joseph A., 80 South Main
1947 Epstein, Joseph I., 195 South Main
1972 Fiducia, Joseph Paul, 80 South Main
1969 Fischbein, Fredric Ian, 80 South Main
1975 Flanagan, Joseph Aloysious, 80 South Main
1962 Gallo, Sebastian John, Middlesex Memorial Hospital
1972 Ganguli, Prabhash Chandra, 28 Crescent
1968 Gerz, Hans O., 75 Acer Dr.
1975 Gersten, Steven P., 210 South Main
1971 Gordon, Eric, Maison D'Accord, Bell
1967 Gorin, Malcolm, 195 South Main
1948 Harvey, Sanford W., Ballfall Rd.
1948 Harwood, Clarence W., 80 South Main
1965 Havlicek, Joseph Anthony, 195 South Main
1968 Hickox, David Beattie, 80 South Main
1977 Jamil, Qazi Akhtar, 547 Main
1971 Johnson, David Porter, Middlesex Memorial Hospital
1974 Kalayjian, David Bernard, 1251 South Main
1965 Kaufmann, Herbert Alfred, 770 Saybrook Rd.
1956 Kelly, John Francis, 770 Saybrook Rd.
1975 Kelly, Margaret DePonte, 256 Old Mill Rd.
1951 Korn, Francis Edwin, 195 South Main
1928 LaBella, Louis Onorato, 760 Saybrook Rd.
1964 Lambe, Thomas Peter, 70 Crescent
1973 Lee, John P., 80 South Main
1973 Lehrman, Jerrold C., 195 South Main
1952 Levine, Herbert, 770 Saybrook Rd.
1957 Magram, Herbert, 45 Crescent
1975 Mahmud, Abdul Wazed, 547 Main
1957 Manzi, Joseph Alexander, 80 South Main
1970 McCarthy, Robert Emmett, 103 South Main
1954 McDowell, Arthur Vennall, 28 Crescent
1963 McKay, Donald, 770 Saybrook Rd.
1940 McLeod, Christie Ellen, 466 Maple Shade Rd.
1966 Miller, Donald Edwin, 80 South Main
1934 Minor, Lloyd Wesley, 329 Coleman Rd.
1976 Morrison, John W. Jr., 195 South Main
1969 Nadel, Martin S., Middlesex Memorial Hospital
1974 Niejadlik, Daniel Charles, Middlesex Memorial Hospital
1939 Palmieri, Mario Lorenzo, 200 Coleman Rd.
1958 Pella, Juan, 243 Main
1956 Pennington, Robert Breece, 80 South Main
1965 Perlin, Louis, 170 Oakcliff Rd.
1959 Prins, Sal A., 67 Old Mill Rd.
1974 Rabuffo, Jeffrey Vincent, 770 Saybrook Rd.
1943 Rafkind, Abraham Benjamin, 212 Hunting Hill Ave.
1972 Robbins, Kenneth Mark, 760 Saybrook Rd.
1965 Rosenbaum, Howard T., Middlesex Memorial Hospital
1977 Roy, Gita, 28 Crescent
1977 Shapter, Robert Kevin, 77 Crescent
1957 Sheehan, Felix Gerard, 589 Saybrook Rd.
1945 Shenker, Benjamin Morton, 1251 South Main
1940 Sherwood, Henry, 195 South Main
1970 Silberstein, Allen B., 28 Crescent
1977 Solter, Allan Warren, 134 Washington
1968 Sosa, Juan B., 109 Broad
1929 Speight, Harold Edmund, 70 Crescent
1969 Stoane, Leonard, Middlesex Memorial Hospital
1957 Sweet, Richard Tallmadge, 770 Saybrook Rd.
1949 Thomson, Archibald Wilson, Jr., 80 South Main
1946 Thumim, Mark, 760 Saybrook Rd.
1978 Timmerman, Donald Dean, 11 Fairview Ave.
1947 Toll, Nina, Box 413 06458
1973 Torop, Paul, 109 Broad
1933 Tracy, F. Erwin, 202 Old Mill Rd.
1954 Turano, Andrew Frank, 80 South Main
1967 Twiss, Harry Younger, Ballfall Rd.
1942 Vinci, Vincent John, 770 Saybrook Rd.
1961 Welling, Searle Kistler, 80 South Main
1967 Yue, James Kar-Kee, 80 South Main
1971 Zavod, Robert, 1 Yellow Birch Rd.
1974 Zavod, William A., 259 Prout Hill Rd.
1974 Zelinka, Miloslav, Wesleyan Univ.

MOODUS 06469

1946 Berwick, Philip, Box 19
1963 Paardenkooper, John, Falls Rd.

OLD SAYBROOK 06475

1962 Brewer, Timothy Francis III, 5 Boulder Dr., Otter Cov
1971 Cook, Donald Edward, 840 Boston Post Rd.
1978 Frank, Martin Jeffrey, 15 Elm
1934 Greenberg, Aaron, 226 Main
1969 Gritzmacher, Richard Orlen, 840 Boston Post Rd.
1956 Irving, William David, 12 Old Boston Post Rd.
1946 Saunders, George Robert, 840 Boston Post Rd.
1971 Sheehan, Bernard F., 263 Main
1974 Thomas, Eric Joseph, 395 Main
1967 Wollack, Anne Carolina, P.O. Box A.W.

PORTLAND 06480

1968 Andrus, Wayne Burton, Stonegate Dr.
1954 Barton, Donn Coleman, 595 Main
1966 Coe, Margaret J., 2 Redberry Lane
1963 Dooley, John A., Grace Lane
1974 Eckhart, Kenneth L., 22 Michele Dr.
1970 Ghaussy, Aziz A., 28 Marlborough
1959 Gray, Philip, 9 Hall Hill Rd.
1947 Longo, Americo Domenico, 344 Main
1977 Rosenfeld, George M., 595 Main
1941 Ryan, V. Gerard, 512 Main, Box 191
1964 Spalding, Peter Edward, Penfield Hill Rd.

WESTBROOK 06498

1974 Cyrus, Roger Wesley, Boston Post Rd.

OUT OF COUNTY

1960 Bellobuono, John R., P.O. Box 2093, Sierra-Vista, Arizona85635
1967 Burkle, Frederick Martin, Jr. Dartmouth Medical Ct Hanover, New Hampshire 03755
1970 Concannon, Patrick R., W.W. II Veterans Hospita Meriden 06450
1977 Ghaussy, Rahmat, 21 Norwich Ave. Colchester 06415
1947 Green, Robert H., 26 Lovers Lane, Madison 06443
1977 Johnson, Virginia Burnham, 113 Water, Guilford 0643
1969 Lambe, Michael Joseph, 100 Prospect Ave., Hartford 06106

1974 Landow, Stephen S., 2 Chapel Dr., Pine Orchard, Branford 06405
1970 Martinson, Edgar O., 47 Shorelands r., Madison 06443
1961 Pernetti, Anthony Miles, Churchwood 2B, Niantic 06357
1937 Rindge, Norman Pember, 14 Strathmore La., Madison 06443
1926 Russman, Charles, 450 Golden Isles Dr., Apt. 2A, Hallandale, Florida 33009
947 Sherman, Benjamin, 156 Palmetto Ave., N. Indialantic, Florida 32903

New Haven County Association

President: Mehdi S. Eslami 1389 West Main, Waterbury 06708
Vice-President: Robert R. Mcdonnell, 1441 Chapel, New Haven 06511
Secretary: Franklin, Robinson, 60 Temple, New Haven 06511
Treasurer: George A. Bonner, 111 Sherman Ave., New Haven 06511
Executive Director: Mr. Peter B. Aaronson, 270 Amity Rd., Woodbridge 06525
Councilor: Mehdi S. Eslami, 1389 West Main, Waterbury 06708
Associate Councilors: Gioacchino Parrella, 2044 Bridgeport Ave., Milford 06460
James W. Tierney, 2044 Bridgeport Ave., Milford 06460
Business office: 270 Amity Rd., Woodbridge 06525
Annual Meeting, Fourth Thursday in March
Semi-Annual Meeting, Wednesday in October

ANSONIA 06401

1964 Cimmino, Gerald Nicholas, 121 Wakelee Ave.
1973 Flores, Jose C., 121 Wakelee Ave.
1946 Haddad, Fred Melad, 112 Pershing Dr.
1977 Hernandez, Juan Ramon, 121 Wakelee Ave.
1954 Hoffer, John Mathew, 121 Wakelee Ave.
1975 Iannotti, Salvatore, 20 Westfield Ave.
1963 Laubstein, Melvin Bernard, 20 Westfield Ave.
1961 Lin, Paul Tong Chang, 121 Wakelee Ave.
1957 Manjoney, Richard Charles, 20 Westfield Ave.
1973 Maric, Radoslav, 121 Wakelee Ave.
1978 Montegut, Ferdinand Josjeph, Jr., 121 Wakelee Ave.
1942 Pepe, Anthony James, 3 Marshall Lane
1932 Renehan, John Michael, 1 Kingston
1964 Shapiro, Bernard Seymour, 121 Wakelee Ave.
1975 Silberberg, William Paul, 400 Main
1966 Smiley, Sheldon S., 121 Wakelee Ave.

BETHANY 06525

1960 Donnelly, John Emmitt, Clay Rd.
1953 Kleeman, James Allen, Bethmour Rd.

BRANFORD 06405

1934 Blanchard, Dana Lincoln, 687 Main
1978 Casden, Richard Stephen, 75 Florence Rd.
1961 Conte, Harry Charles, 45 South Main
1974 Drakonakis, Andrew C., 650 Main
1945 Gencarelli, Alphonse Frank, 2 Peddler's Dr.
1955 Goldenring, Herbert, 62 Kirkham
1978 Howard-Flanders, June Daphne, 18 Rockland Park
1978 Kaufman, Richard Enoch, 960 Main
1976 Levine, Robert Aaron, 960 Main
1962 Levy, Harold David, 140 Montowese
1929 Levy, Nathan, 140 Montowese
1943 Lindskog, Gustaf Elmer, 16 A Harbour Village
1978 Mirzayantz, Alexander, 687 Main
1972 Montgomery, John Sloan, 896 Main
1956 Nickou, Nickolas, 687 Main
1966 Rosenbloom, Marshall Lewis, 62 Kirkham
1946 Rosenthal, Richard Louis, 687 Main
1962 Scherr, Edward Stanley, 960 Main
1971 Smith, Robert Pease, 93 Linden Ave.
1974 Stitelman, Michael, 211 Montowese
1924 Taylor, Robert Mitchell, 36 Castle Rock
1977 Viscomi, Gregory N., 87 Florence Rd.
1936 Wies, Frederick Albert, 220 Damascus Rd.
1958 Zimmerman, Marvin Paul, 960 Main

CHESHIRE 06410

1952 Armbruster, Lois Deming, Main
1953 Butler, Robert William, 146 Park Pl.
1949 Dayton, Charles John, 15 Chipman Dr.
1975 DiMauro, Louis Mario, 1175 South Main
1976 Esposito, Joseph, 158 North Timber La.
1963 Grycz, Henry J., 432 Maple Ave.
1963 Heiger, Arnold Alexander, 1175 South Main
1960 Kramer, Fred Michael, 167 Spring
1975 Landy, Gail, 81 Fernwood Lane
1959 Mack, Gerhard T., 577 South Main
1973 Miller, Mary Margaret, 577 South Main
1960 Mirkhani, Mahmood, 1175 South Main
1923 Moore, Wilbur John, 240 Maple Ave.
1940 Neff, William Everett, Jr., 93 Main
1939 Oxnard, Edward Warren, 15 Chipman Dr.
1976 Panaligan-Noble, Rosemarie, 152 Payne Dr.
1974 Rauch, Erlinda, 475 Riverside Dr.
1976 Salzman, Michael Alan, 15 Chipman Dr.
1977 Sataline, Lee R., 366 South Main
1975 Smith, Gordon Waldo, 416 Highland Ave.

DERBY 06418

1970 Baker, Earl Lewin, 314 Elizabeth
1968 Boltax, Robert Stanley, 299 Seymour Ave.
1968 Bratu, Marcel, 445 New Haven Ave.
1971 Brown, William Tibor, 190 Main
1969 Cadelina, Wilfredo Enriquez, 130 Division
1965 Catanuto, Nicholas Thomas, 435 New Haven Ave.
1969 Davidson, Alan Cahn, 445 New Haven Ave.
1956 DeLuca, Vincent Alfred, Jr., 130 Division
1966 Dineen, Joseph Patrick, 299 Seymour Ave.
1975 DiPasquale, Ned M., Plaza-on-the-Green
1958 Doheny, James Joseph, 435 New Haven Ave.
1974 Fine, Norman L., Griffin Hospital
1966 Gagliardi, Joseph Matthew, Jr., 67 Maple Ave.
1946 Galen, Jack Harris, 445 New Haven Ave.
1977 Germano, Gerald James, 445 Derby Ave.
1966 Habib, Nabil Iskander, 299 Seymour Ave.
1957 Holden, Jack, 445 New Haven Ave.
1976 Katz, Richard M., 299 Seymour Ave.
1975 Kligfeld, Michael, Plaza-on-the-Green
1971 Lawson, Jack Philip, Griffin Hospital
1970 Levy, Richard Martin, 67 Maple Ave.
1978 Malitz, Alan J., Plaza-on-the-Green
1967 Marignani, Pierluigi, 130 Division
1959 Milazzo, Nicholas Joseph, 299 Seymour Ave.
1974 Moll, David, 299 Seymour Ave.
1971 Myerson, Daniel Allen, Griffin Hospital
1971 Myerson, Paul J., Griffin Hospital
1975 Narowski, Cecilia A., 17 Elizabeth
1944 Narowski, John Joseph, 17 Elizabeth
1910 Parlato, Michael Antonino, 101 Sentinel Hill Rd.
1969 Pavlo, Ludwig Joseph, 380 New Haven Ave.
1969 Pavlo, Maria Margarete, 380 New Haven Ave.
1975 Pearlstein, Arthur T., Plaza-on-the-Green
1955 Petrie, Stewart Judson, 56 Minerva
1976 Purpora, David Peter, 435 New Haven Ave.
1925 Rentsch, Samuel Burton, 61 Seymour Ave.
1975 Scarpa, Francis Joseph, 299 Seymour Ave.
1975 Schwartz, Kenneth V., Griffin Hospital
1977 Shah, Ashokkumar Kantilal, 299 Seymour Ave.

1964 Sikorski, Jerzy Jan, Griffin Hospital
1972 Silverman, Nira Rubin, 101 Elizabeth
1967 Silverstein, David M., 5 Maple Ave.
1974 Slepian, Jacob Zeiger, 101 Elizabeth
1968 Stier, Stanley D., 435 New Haven Ave.
1958 Wirth, Michael Nahum, 58 Minerva
1962 Wugmeister, Michael, Griffin Hospital

DEVON 06462

1947 Malone, Robert Francis, 21 Rivercliff Dr.

EAST HAVEN 06512

1952 Albis, Francis Joseph, 60 Edward
1952 Albis, Michael Daniel, 60 Edward
1940 Balletto, Vincent, 535 Thompson Ave.
1929 Fiskio, Peter William, 280 Main
1940 Garofalo, Mario Louis, 80 Morgan Ave.
1961 Mancini, Anthony D., 176 Tyler
1953 Van Eck, William Frederik, 300 Main
1954 Vermande, Gertrude Joanna, 300 Main

GUILFORD 06437

1951 Adams, Elisabeth C., On the Green
1976 Allen, Edward W., 504 Goose La.
1977 Bavor, Clayton Woodward, 82 Russet Dr.
1963 Brogden, John Malcolm, 152 Broad
1934 Canfield, Norton, 29 Whitfied
1974 Crawford, William Osgood, 264 Church St.
1958 Cunningham, Peter Ritsher, 152 Broad
1974 Cwik, Ronald Arthur, 152 Broad
1954 Emery, Felice Menuez, 85 Long Hill Rd.
1976 Fink, Martin E., 150 Boston Post Rd.
1976 Haeseler, Frederick D., 29 Whitfield
1977 Heinz, Peggy Smythe, 652 Boston Post Rd
1948 Horton, William Hanson, Falcon Rd., Sachem's Head
1952 Igersheimer, Walter Wilhelm, 111 Dolan Dr.
1971 Lowry, Elizabeth C., 152 Broad
1970 McGrath, Brian John, 652 Boston Post Rd.
1954 Mermann, Alan Cameron, 152 Broad
1977 Perina, Barbara Ann, 515 Boston
1974 Pruett, Kyle Dean, 10 Fernwood Dr.
1971 Rapkin, Robert Michael, 652 Boston Post Rd.
1963 Wakeman, Edward Maurice, 152 Broad

HAMDEN

1958 Arnstein, Robert Leo, 79 Killdeer Rd. 06517
1976 Bekeny, Dennis Paul, 243 Skiff 06517
1955 Bellis, John Marvin, Jr., 2804 Whitney Ave. 06518
1977 Berman, Michael Richard, 670 Mix Ave. 06514
1962 Brady, James Joseph, 2447 Whitney Ave. 06518
1955 Coe, Ronald Eliot, 1733 Whitney Ave. 06517
1973 Cohn, George Louis, 67 Charlton Hill 06518
1953 Colwell, Bradford Stevens, 299 Washington Ave. 06518
1936 Corey, Walter Van Arsdale, 1188 Whitney Ave. 06517
1940 Cutler, Hermann Shepard, 1100 Dixwell Ave. 06514
1935 D'Esopo, Joseph Nicholas, 174 Blake Rd. 06517
1964 Della Valle, Louis, 1199 Whitney Ave. 06517
1978 Fernando, Kumudhini, 1100 Dixwell Ave. 06514
1969 Fezza, Andrew John, 2572 Whitney Ave. 06518
1956 Fezza, Michael Lawrence, 2572 Whitney Ave. 06518
1959 Fischer, Daniel George, 99 Circular Ave. 06514
1970 Fishbone, Gerald, 50 Myra Rd. 06517
1951 Freedman, Morris, c/o Arnold Freedman, 22 Andover Rd. 06518
1978 Gager, Fred V., 1100 Dixwell Ave. 06514
1973 Ghofrany, Fereshteh Naghshineh, 299 Washington Ave. 06518
1972 Ghofrany, Shukrullah, 299 Washington Ave. 06518
1949 Haley, John Carlin, 295 Washington Ave. 06518
1972 Hambly, Robert Gagnon, 1100 Dixwell Ave. 06514
1951 Hart, Robert W., 295 Washington Ave. 06518
1971 Hyland, John, 200 Westwood Rd. 06518
1967 Jones, Charles Ray 295 Washington Ave. 06518
1966 Kay, Foster, 2447 Whitney Ave. 06518
1946 Kertesz, Johann, 1110 Still Hill Rd. 06518
1949 La Femina, Nicholas Francis, 60 Dawes Ave. 06517
1972 Langenauer, Bernard J., 35 Lincoln 06518
1961 Levenstein, Marvin, 2572 Whitney Ave. 06518
1970 Levis, Albert Jesula, 2750 Whitney Ave. 06518
1958 Lion, Daniel Joseph, 1797 Whitney Ave. 06517
1956 Loewald, Elizabeth Longshore, 2 Bayberry Rd. 06517
1942 McKeon, James Joseph, 1828 Dixwell Ave. 06514
1940 Mendelsohn, William, 707 Mix Ave. 06514
1954 Newton, Robert Floyd, 2508 Whitney Ave. 06518
1938 Parente, Leonard, 185 Braeside Dr. 06514
1949 Radowiecki, M. Walter, 193 Corbin Rd. 06517
1977 Rethy, Charles Robert, 2447 Whitney Ave. 0651
1946 Richards, William Raymond, 116 Brook 06514
1956 Rubin, Arthur A., 5 Hearn Lane 06514
1914 Russell, Thomas H., 46 Jackson Rd. 06517
1971 Saracco, Fernando P., 2690 Whitney Ave. 06518
1958 Schlessel, Theodore Elliot, 1100 Dixwell Ave. 06514
1948 Scholhamer, Charles Frederick, 9 Killdeer Rd. 06517
1975 Scialla, Anthony V., 39 Dessa Dr. 06517
1977 Shaban, Sedat S., 295 Washington Ave. 06518
1929 Shure, Abraham Lewis, 22 North Lake Dr. 06517
1946 Slater, Daniel, 1100 Dixwell Ave. 06514
1927 Slater, Morris, 1100 Dixwell Ave. 06514
1946 Snoke, Albert Waldo, 100 Santa Fe Ave. 06517
1966 Tjimis, Pavlos Demetriou, 2447 Whitney Ave. 06518
1947 Trifari, Leopold Mariano, 55 Ranch Rd. 06517
1943 Verstandig, Charles Coleman, 19 Filbert 06517
1945 Waldemer-Kertesz, Johanna, 1110 Still Hill Rd. 06518
1975 Zinn, Donald F., 205 Hepburn Rd. 06517

MADISON 06443

1946 Birnbaum, Hyman Bunge, Boston Post Rd.
1947 Elgosin, Richard B., 10 Oak Ave.
1977 Gleich, Edward Harvey, 1110 Durham Rd.
1976 Keszler, Kornelia, 25 Durham Rd.
1975 Lyall, Santokh Singh, 20 Laurelcrest Rd.
1976 Sayers, Ross, 1089 Boston Post Rd.
1967 Sklaire, Martin William, Wall

MERIDEN

1963 Abrahams, Irwin Willard, 116 Cook Ave. 06450
1965 Albert, Marvin, W. W. II Veterans Mem'l Hospital 0645
1974 Alonso, Luis, 377 Broad 06450
1950 Badner, Donald, Harold, 116 Cook Ave. 06450
1976 Barroeta, Gustavo R., Meriden-Wallingford Hospital 0645
1977 Biondino, C. Robert, 140 Green Rd. 06452
1959 Brown, Marion R. S. 95 East Main 06451
1947 Brown, Patrick Neely, 95 East Main 06451 and 133 Main, Bristol 06010
1977 Brumberger, Bruce Joel, 224 Cook Ave. 06450
1948 Burbank, John, 335 Cook Ave. 06450
1969 Burch, Peter George, 477 South Broad 06450
1955 Butenas, Carl, 319 Hanover 06450
1929 Campbell, Sherburne, 1192 East Main 06451
1962 Campione, Matthew Philip, 405 Broad 06452
1937 Carey, William Clark, 377 Broad 06450
1974 Cohen, Gary Mark, 219 W. Main 06450
1973 Concannon, Patrick Ronald, W.W. II Veterans Hospital 0645
1967 Conroy, Michael M., 473 Broad 06450
1949 Cusnir, Marion, 21 Colony 06450
1948 Dickinson, George Herbert, 199 West Main 06450
1956 Esposito, Michael Joseph, 379 Oregon Rd. 06450
1975 Flores, Silvia Emilia, P.O. Box 2415
1950 Flynn, Charles Thomas, Jr., 140 Green Rd. 06452

1948 Flynn, John Benedict, 377 Broad 06450
1940 Fox, George Graham, 140 Green Rd. 06452
1974 Franceson, Sergio Degan, 391 Broad 06450
1967 Franz, Adolph II, 140 Green Rd. 06452
1973 Friedman, Stanley Ira, 219 West Main 06450
1964 Fritz, Harvey Lawrence, 219 West Main 06450
1946 Glike, Frederick Philip, 12 Linsley Ave. 06450
1975 Goodman, Doris T.H., 2 Brownstone Ridge 06450
1966 Goodman, Joseph Louis, 219 West Main 06450
1972 Gottlieb, Marvin B., 116 Cook Ave. 06450
1976 Groome, Douglas John, 285 Broad 06450
1967 Guttenberg, Irving, 219 West Main 06450
1929 Hall, William Edward, 5 South Broad Ter. 06450
1959 Hennessey, John Francis, 181 Cook Ave. 06450
1975 Hollander, Michael Eugene, 116 Cook Ave. 06450
1974 Jeshuran, Winston R., 1146 West Main 06450
1957 Kahn, Daniel, 130 East Main 06451
1970 Kaplan, Harold Paul, 219 West Main 06450
1941 Katz, Irving, 304 Broad 06452
1976 Kim, In Kwiy, 219 West Main 06450
1944 Krochmal, Henry, P.O. Box 942 06450
1975 Levin, Lewis, 12 Curtis 06450
1939 L'Heureux, Jerome Arthur, 405 Broad 06452
1934 Lirot, Stephen L., 410 East Main 06450
1946 Lohrmann, Walter, 11 Live Oak Lane 06452
1970 McGann, Robert Farquharson, 224 Cook Ave. 06450
1975 Meyer, Louis, 405 Broad 06450
1934 Misuk, Joseph Francis, 430 Broad 06452
1972 Moreschi, Francesco Panfilo, 412 South Broad 06450
1972 Morrison, Robert Francis, 116 Cook Ave. 06450
1976 Mullin, Robert Lester, Meriden-Wallingford Hospital 06450
1960 O'Regan, Patrick Tobias, 24 Columbus Ave. 06450
1975 Ortiz, Fernando, 412 South Broad 06450
1969 Osadchey, Lance M., 108 Sweet Birch Dr. 06450
1966 Paggioli, John William, 116 Cook Ave. 06450
1956 Parke, David William, 477 South Broad 06452
1960 Patterson, Earl Stewart, 236 West Main 06450
1952 Pepe, Vincent, 116 Cook Ave. 06450 and 26 Fair, Wallingford 06492
1954 Persons, Ray E., 71 Parker Ave. 06452
1931 Pierson, Louis A., 199 West Main 06450
1967 Pratt, Hamp Smead, 116 Cook Ave. 06450
1966 Pyun, Kyum Sik, 181 Cook Ave. 06450
1976 Redmond, John William, 477 South Broad 06450
1973 Ritter, Maria Elisabeth, Canberra Laboratories, 45 Gracey Ave. 06450
1947 Robb, Samuel Aloysius, 116 Cook Ave. 06450
1966 Russell, William, 377 Broad 06450
1966 Scheer, Carl Weston, 335 Cook Ave. 06450
1956 Schurgast, Anselm W., 130 East Main 06451
1968 Shiffman, Irving, 219 West Main 06450
1954 Sillman, Eugene, 67 Lambert 06450
1977 Smith, Richard Alan, 181 Cook Ave. 06450
1957 Tonkonow, Francis Harold, 140 Green Rd. 06452
1950 Trent, Sophie Clara, 96 Boylston, North 06451
1978 Vahidy, Misbah M., 377 Broad 06450
1963 Wagshul, Ely Cutler, 116 Cook Ave. 06450
1956 Wallace, Edward Paez, 285 Broad 06450
1946 White, Howard Thomas, 84 Live Oak Lane 06452
1971 Willett, Leo Vincent, Jr., 140 Green Rd. 06450
1954 Zimerman, Joseph, 319 Hanover 06450

MIDDLEBURY 06762

953 Arnold, William Parsons, Jr., White Deer Rock Rd.
975 Campbell, David I., Whittemore Rd.
972 Daniels, Darrell S., 415 Middlebury Rd.
957 Liao, Sung Jwi, Sky Line Dr.
941 Riccio, Joseph S., Blueberry Knoll

MILFORD 06460

1934 Andrus, Oliver Burton, P.O. Box 415
1970 Baird, William Hennings, 105 North
1938 Barney, Walter Edward, 2044 Bridgeport Ave.
1974 Baron, Michael Austin, 75 New Haven Ave.
1978 Batiancila, Vicente Valiente, 2044 Bridgeport Ave.
1957 Bayless, Allan Eugene, Milford Hospital
1977 Blum, Richard Stephen, 112 Broad
1970 Boyd, John Edward, 280 Broad
1956 Brandt, Allan Adolph, 2047 Bridgeport Ave.
1972 Brothers, David M., 135 Cherry
1976 Buckley, Donald Francis, 221 Broad
1949 Buckman, Robert Francis, 2068 Bridgeport Ave.
1975 Chandra, Birur G., 2044 Bridgeport Ave.
1957 Chiappinelli, Dante, 2044 Bridgeport Ave.
1969 Coassin, Nicholas Angelo, 75 New Haven Ave.
1962 Coppes, Henri R., 280 Broad
1963 Corsaro, Theodore Pascal, 2044 Bridgeport Ave.
1968 De Negre, Louis Mark, 2044 Bridgeport Ave.
1963 Engel, Harry Paul, 62 West Main
1976 Eriksen, Lance, 36 West Main
1959 Fink, Howard David, 75 New Haven Ave.
1959 Fox, Marvin Irving, 122 Broad
1976 Ganesan, Murugesapillai, 2068 Bridgeport Ave.
1978 Goldberg, Barry, 1 Golden Hill
1959 Gruskay, Frank Louis, 1 Golden Hill
1963 Hare, Edward Treen, Jr., 21 Cherry
1976 Huszar, Theresa G., 309 Seaside Ave.
1960 Hyland, Francis Joseph, 284 Broad
1960 Janet, Samuel J., 234 Broad
1964 Keegan, James Thomas, 75 New Haven Ave.
1959 Kerin, Robert, 112 Broad
1944 Langner, Helen P., 1 Shipyard Lane
1946 Lipkoff, Clarence Joseph, 83 Point Lookout
1975 Lundborg, Carl Burton, 281 Seaside Ave.
1972 Meia, Harley B., 122 Broad
1966 Messore, Giacomo, Milford Hospital
1971 Naiman, Peter T., 281 Seaside Ave.
1971 Pardi, M.T., 123 Cedar Hill Rd.
1946 Parrella, Gioacchino, 2044 Bridgeport Ave.
1964 Philbrick, Clement John, Jr., 284 Broad
1974 Ragaza, Aleflor T., 2044 Bridgeport Ave.
1953 Rapoport, Leonard M., 75 New Haven Ave.
1975 Rosenthal, Benjamin B., 2051 Bridgeport Ave.
1959 Shelling, Richard Lawrence, 1 Golden Hill
1964 Stein, Michael Lewis, 1 Golden Hill
1933 Stetson, Harry Warren, 46 Robert Treat Pkwy.
1956 Tierney, James William, 2044 Bridgeport Ave.
1977 Wang, Pang, Hsung, 309 Seaside Ave.
1947 Weston, Robert Alphaeus, Jr., 2068 Bridgeport Ave.
1968 Winters, Barry Michael, 73 Golden Hill
1964 Wolfson, Alvin, 284 Broad
1969 Yoon, Hee R., 2044 Bridgeport Ave.

NAUGATUCK 06770

1977 Barter, John Patrick, 35 Porter Ave.
1977 Brennan, Edmund James, 573 North Church
1963 Cornacchia, Rocco, 567 Field
1963 Elser, John Peter, Church
1968 Falk, Maurice, 577 North Church
1958 Gerber, Edward, Jr., 305 Church
1976 Greengold, Julian Bart, 305 Church
1955 Hill, William Edward, Jr., 150 Meadow
1963 Labriola, Gerald, 577 North Church
1972 Ransome, Oscar John, 577 North Church
1940 Tylec, Leo Louis, 156 Meadow
1926 Williams, Edward Everett, 580 Hillside Ave.
1975 Yu Ching-Yi, 35 Porter Ave.

NEW HAVEN

1975 Aaronson, Robert M., 2 Church South 06519
1945 Albom, Jack Jonathan, 2 Church South 06519
1964 Albright, James A., 789 Howard Ave. 06504
1953 Alderman, Donald Bruce, 1423 Chapel 06511
1977 Allen, William Edward, III, 60 Temple 06510
1960 Alpert, Abraham Edward, 301 Orchard 06511
1967 Altshul, Victor A., 58 Trumbull 06510
1932 Amatruda, Frank Gabriel, 8 Beechwood La. 06511
1955 Ameen, Lane, 210 Prospect 06511
1964 Amore, Frederick Robert, 167 Maple 06511
1969 Anderson, Frederick Paffard, 150 Sargent Dr. 06511
1976 Angoff, Ronald, 116 Sherman Ave. 06511
1976 Ariyan, Stephen, 333 Cedar 06510
1965 Arons, Marvin Shield, 2 Church South 06519
1968 Asis, Jose, 301 Orchard 06511
1969 Atocha, Jose, 1435 Chapel 06511
1975 Aversa, John Michael, 60 Temple 06510
1971 Baker, Sidney MacDonald, 310 Prospect St. 06511
1954 Baratz, Merrill A., Yale Health Service 06520
1955 Barile, Albert William, 310 Winthrop Ave. 06511
1973 Barse, Richard Joseph, 1308 Chapel 06511
1957 Baskin, Arnold M., 60 Temple 06510
1930 Batelli, Clement Francis, 328 Townsend Ave. 06512
1955 Batt, Harold David, 301 Orchard 06511
1925 Battista, Anthony William, 111 Osborn Ave. 06511
1975 Baue, Arthur E., 333 Cedar 06510
1976 Baughn, Steven Peyton, 428 Columbus Ave. 06519
1978 Bearman, Joseph Lawrence, 428 Columbus Ave. 06519
1963 Beatrice, Marianne Angela, 1370 Chapel 06511
1974 Belleza, Norberto, Alegarbes, 789 Howard Ave. 06504
1965 Bender, Morton, 100 York 06511
1940 Berlowe, Max Llewellyn, 2 Church South 06519
1949 Berman, Sidney, 123 York 06511
1944 Berneike, Robert R., 878 Howard Ave. 06519
1955 Billings, William Clarke, Yale Health Service 06520
1940 Biondi, Benedict, 120 Blatchley Ave. 06513
1977 Blanton, John William, Jr., 17 Hillhouse Ave. 06520
1974 Bobrow, Samuel Niel, 60 Temple 06510
1969 Boltax, Sandra Parzow, 333 Cedar 06510
1954 Bonner, George Arthur, 111 Sherman Ave. 06511
1960 Bove, Joseph Richard, P.O. Box 1001 06504
1963 Bradburn, Hubert Benjamin, 60 Temple 06510
1971 Bradford, Kenneth Alan, 116 Sherman Ave. 06511
1967 Branch, James Christian, P.O. Box G, Westville Station 06515
1951 Brand, Elliott Saul, 123 York 06511
1977 Brand, Myron Howard, 2 Church South 06519
1977 Brauer, Rima Lois, 291 Whitney Ave. 06511
1967 Braverman, Irwin Merton, 333 Cedar 06510
1971 Brink, Adolph Joseph, 227 Church 06510
1962 Brochin, Malcolm, 136 Sherman Ave. 06511
1956 Brodoff, Stanley S., 2 Church South 06519
1946 Bruno, Joseph Julius, 1266 Forest Rd. 06515
1943 Calabresi, Massimo, 300 Ogden 06511
1960 Camilleri, Joseph Angelo, 878 Howard Ave. 06519
1957 Cappucci, Louis William, 116 Avon 06511
1974 Carangelo, Edward Vincent, 313 Humphrey 06511
1916 Carelli, Genesis Frank, 256 Yale Ave. 06515
1972 Carlson, David Adelbert, 135 Whitney Ave. 06510
1949 Carter, Max George, 670 George 06510 and 3 Second Ave., Waterbury 06710
1964 Cassin, Carl Michael, 2 Church South 06519
1946 Castiglione, Frank Michael, 41 Trumbull 06510
1975 Cavallaro, Peter Julius, 2 Church South 06519
1932 Celentano, Luca Eugene Humbert, 1455 Chapel 06511
1975 Chang, Effie Chen-Chu, 136 Sherman Ave. 06511
1978 Charney, James, 34 Park 06519
1975 Chen, Michael Graham, Yale Univ. Sch. Med. 06510
1946 Cheney, Charles Brooker, 111 Park 06511
1956 Chetrick, Allen, 2 Church South 06519
1975 Ciardiello, Kenneth Anthony, 2 Church South 06519
1947 Cipriano, Anthony Pasquale, 451 Orange 06511
1938 Clarke, Clement Cobb, 240 Bradley 06510
1946 Clement, David Hale, 2 Church South 06519
1976 Clement, Patrick Anthony, 428 Columbus Ave. 06519
1935 Climo, Samuel, 291 Whitney Ave. 06511
1950 Cohart, Edward M., 60 College 06510
1977 Cohen, Steven R., 333 Cedar 06510
1924 Cohen, William, 1435 Chapel 06511
1971 Cole, Jack Westley, 333 Cedar 06510
1964 Cole, Ransey Guy, 432 Dixwell Ave. 06511
1951 Coleman, Jules Victor, 135 Whitney Ave. 06510
1968 Collins, William Francis, 333 Cedar 06510
1931 Connolly, Arthur James, 136 Sherman Ave. 06511
1958 Conte, Bernard Lewis, 598 George 06511
1939 Conte, Mario Gero, 1435 Chapel 06511
1970 Cooper, Richard Arnold, 60 Temple 06510
1973 Coppola, Paul Joseph, 100 York 06511
1931 Corradino, Charles Louis, 2 Church South 06519
1955 Cousins, Marvin Lee, 1308 Chapel 06511
1975 Covey, Susan Singer, Hospital of St. Raphael 06511
1967 Cronin, Michael Thomas Ignatius, 67 Edgehill Rd. 06511
1975 Cruz, Luis R., 136 Sherman Ave. 06511
1952 Cusanelli, Gabriel Nicholas, 235 Bishop 06511
1924 Dallas, Marion, 248 Bradley 06510
1971 Dann, Oliver Townsend, 190 Everit 06511
1951 Davey, Lycurgus Michael, 60 Temple 06510
1973 DeDios, Victor K., 191 Sherman Ave. 06511
1942 de Forest, Gideon Knapp, 309 Edwards 06511
1951 D'Elia, Pierino Francis, 1423 Chapel 06511
1974 Della Porta, Joseph, 1471 Chapel 06511
1964 Demir, Peter, 2 Church South 06519
1967 DePonte, Ralph Joseph, 60 Temple 06510
1943 de Suto-Nagy, Ilona Krasso, 139 Alston Ave. 06515
1977 Deva, Vijaya, 428 Columbus Ave. 06519
1977 Di Sabatino, Charles A. Jr., 60 Temple 06510
1961 Dock, Donald Stone, 1450 Chapel 06511
1956 Dolinsky, Albert Harold, 2 Church South 06519
1972 Dowaliby, James Michael, II, 2 Church South 06519
1965 Downing, Lewis Clinton, 1488 Chapel 06511
1976 Dwyer, Francis Doyle, 245 Lakeview Terr. 06515
1948 Dwyer, Hugh Leo, Jr., 2 Church South 06519
1954 Ebbert, Arthur, Jr., 333 Cedar 06510
1969 Edelson, Marshall, 25 Park, G.E.B. 617 06519
1967 Esdaile, Wilbur Walter, 466 Dixwell Ave. 06511
1968 Etkind, Edward Lawrence, 1546 Chapel 06511
1946 Etkind, Meyer George, 1546 Chapel 06511
1925 Evans, Theodore Schlosser, 200 Linden 06511
1970 Fabbri, Remo, Jr., 31 High 06510
1971 Farber, Leonard Raymond, 60 Temple 06510
1950 Fasanella, Rocko Michael, 842 Howard Ave. 06519
1957 Fasano, Leonard Alfonse, 980 Whalley Ave. 06515
1964 Fazzone, Philip Robert, 670 George 06511
1968 Fearon, Richard Eubanks, 2 Church South 06519
1969 Fenn, John E., P.O. Box 1001, Yale-New Haven Hospital 06504
1966 Fenton, Robert H., 654 George 06511
1966 Ferando, Louis John, 1427 Chapel 06511
1973 Fessel, Jon Michael, 111 Park 06511
1951 Filer, Harry Lambert, Jr., 1423 Chapel 06511
1974 Finseth, Frederick James, 333 Cedar 06510
1966 Fischer, David Seymour, 60 Temple 06510
1969 Fischer, James J., 789 Howard Ave. 06504
1948 Fitzpatrick, Eugene Joseph, 111 Park 06511
1973 Flagg, Stephen Vreeland, 60 Temple 06510
1972 Flamm, Gerald Howard, 1450 Chapel 06511
1954 Fleck, Stephen, 25 Park 06519
1929 Flynn, Harold Aloysius, 464 Dixwell Ave. 06511
1953 Flynn, John Hine, 41 Trumbull 06510
1974 Forman, Barr H., 1401 Chapel 06511
1950 Forman, Joseph Bernard, 874 Howard Ave. 06519
1953 Fournier, Reginald E., 338 Alden Ave. 06515

1976 Frank, Steve M., 428 Columbus Ave. 06519
1956 Frankel, Saul Arnold, 2 Church South 06519
1975 Frazier, William H., 333 Cedar 06510
1953 Frechette, Eugene Joseph, Jr., 1441 Chapel 06511
1977 Freedman, Gerald Stanley, 60 Temple 06510
1963 Freedman, Jerome Kenneth, 1423 Chapel 06511
1936 Freeman, David, 43 College 06510
1962 Friedman, Cyrus Robert, 65 Trumbull 06510
1941 Fuldner, Russell Victor, 178 Sherman Ave. 06511
1976 Gaines, J. David, 428 Columbus Ave. 06519
1976 Galloway, Shelby, Hospital St. Raphael 06511
1976 Geha, Alexander S., 333 Cedar 06510
1937 Gentile, Angelo Louis, 1488 Chapel 06511
1978 Gerstenhaber, Brett J., 60 Temple 06510
1923 Gettings, James Augustus, 256 McKinley 06515
1976 Gibson, Douglas W., Hospital St. Raphel 06511
1951 Gibson, Fred, 260 Knollwood Dr. 06515
1953 Glaser, Gilbert H., 333 Cedar 06510
1947 Glaser, William, 2 Church South 06519
1955 Glassman, Irving, 186 Sherman 06511
1926 Glazer, Morris, 461 Whalley Ave 06511
1949 Glenn, William W. L., 333 Cedar 06510
1974 Glickman, Morton G., Yale-New Haven Hospital 06504
1947 Goetsch, John Black, 878 Howard Ave. 06519
1976 Gold, Jeffrey D., 109 Sherman Ave. 06511
1972 Goldblatt, Philip Brian, 315 Whitney Ave. 06511
1957 Goldenberg, Ira Storin, 333 Cedar 06510
1958 Goldenthal, Summer, 2 Church South 06519
1963 Goldstein, Jacob, 517 Ellsworth Ave. 06511
1954 Goldstein, Paul Stanley, 1450 Chapel 06511
1951 Golia, Ulyssess Vitalio, 1423 Chapel 06511
1976 Gonzalez, Caleb, 789 Howard Ave. 06504
1964 Goodman, Alan Herman, 60 Temple 06510
1971 Goodrich, Isaac, 60 Temple 06510
1950 Goodyear, Allan Victor, 333 Cedar 06510
1954 Gordon, Martin Eli, 111 Sherman Ave. 06511
1952 Gordon, Robert Stanton, 111 Park 06511
1968 Gottlieb, Felix Isaac, 1484 Chapel 06511 '
1975 Gouterman, Ira H., 333 Cedar 06510
1966 Graham, Andrew Jesse, 2 Church South 06519
1975 Grauer, Leonard Edwin, 60 Temple 06510
1975 Graziano, Antonio, 422 Dixwell Ave. 06511
1967 Greenberg, Alvin Donald, 60 Temple 06510
1924 Greenhouse, Barnett, 1687 Boulevard 06511
1960 Greenspan, Richard Henry, 333 Cedar 06510
1958 Greenwald, Willard F. Jr., 111 Park 06511
1939 Guida, Francis Paul, 1441 Chapel 06511
1976 Guida, Paul C., 1441 Chapel 06511
1964 Gurwitt, Alan Richard, 315 Whitney Ave. 06511
1977 Haak, Bruce Bowen, 60 Temple 06510
1962 Handler, Seymour L., 360 Orange 06511
1967 Hansen, Thomas Wilcox, 2 Church South 06519
1975 Hanson, Thomas Michael, 60 Temple 06510
1978 Harris, Paul, 428 Columbus Ave. 06519
1931 Harrison, Elizabeth Ross, 255 Bradley 06510
1935 Hart, James Clement, 820 Elm St. 06511
1953 Harvard, Bell Marvin, Jr., 2 Church South 06519
1952 Harvey, Richard Bennett, 251 Edward 06511
1977 Hasbani, Moshe, 2 Church South 06519
1954 Hayes, Mark Allen, 333 Cedar 06510
1942 Hersey, Thomas Francis, 291 Whitney Ave. 06511
1973 Hicks, Jeanne E., 123 York 06511
1970 Higgins, Don Cheney, 111 Park 06511
1943 Hodgkins, Charles Henry, 315 Whitney Ave. 06511
1964 Hogan, Gilbert Francis, 100 York 06511
1970 Holley, Marshall, 226 Dixwell Ave. 06511
1960 Houlihan, Robert Kenneth, 2 Church South 06519
1978 Hughes, John Schley, 374 Grand Ave. 06513
1976 Hunt, Kevin James, 1401 Chapel 06511
1955 Hurwitz, Sidney, 2 Church South 06519
1973 Hurzeler, Marc A., 100 York 06511
1974 Isay, Richard Alexander, 100 York 06511
1967 Jackson, Stanley Webber, 34 Park 06519
1967 Jacobson, Harvey, 1485 Chapel 06511
1976 Jokl, Peter, 17 Hillhouse Ave. 06520
1938 Jordan, Robert Hough, 111 Park 06511
1949 Joseph, Lester George, 175 Bishop 06511
1974 Kaplowe, Joseph Louis, 195 Sherman Ave. 06511
1967 Kashgarian, Michael, 310 Cedar 06510
1955 Katz, Jay, 65 Trumbull 06510
1977 Katz, Martin, Edward, 60 Temple 06510
1951 Kazanjian, Norton Artin, 1423 Chapel 06511
1967 Kenney, James Duncan, 60 Temple 06510
1976 Kerin, William, 301 Orchard 06511
1943 Kessler, Frederick, 100 York 06511
1975 Khachane, Vasant Bhojraj, 670 George 06511
1972 Khu, Enrico G., 191 Sherman Ave. 06511
1976 Kim, Charles Chang Suh, 1435 Chapel 06511
1964 Kim, Kisik, 136 Sherman Ave. 06511
1962 King, Russell Patrick, 100 York 06511
1951 Kirchner, John Albert, 333 Cedar 06510
1965 Kitahata, Luke Masahiko, 789 Howard Ave. 06504
1938 Klatskin, Gerald, 333 Cedar 06510
1975 Knobelman, Richard A., 60 Temple 06510
1971 Knowlton, Arthur Howard, Hospital of St. Raphael 06511
1974 Koenigsberg, Daniel Meir, 62 Trumbull 06510
1940 Koufman, William Bernard, 186 Sherman Ave. 06511
1965 Kra, Siegfried J., 2 Church South 06519
1964 Krassner, Leonard Sanders, 116 Sherman Ave. 06511
1954 Kreis, David John, 2 Church South 06519

1942 Krosnick, Gerald, 2 Church South 06519
1935 Krosnick, Morris Yale, 119 West Park Ave. 06511
1949 Kummer, Alfred John, 251 Edwards 06511
1937 Kushlan, Samuel Daniel, Yale-New Haven Hospital, P.O. Box 1001 06504
1976 Kutcher-Henchel, Jacqueline Jewish Home For The Aged, 167-169 Davenport Ave. 06519
1974 Kwass, Walter, 1423 Chapel 06511
1957 LaCamera, Robert George, 878 Howard Ave. 06519
1948 Lach, Frank Edward, 181 Edwards 06511
1961 Landau, Saul Jack, 60 Temple 06510
1976 Lande, Saul, 1450 Chapel 06511
1961 Lattanzi, William Edward, Hospital of St. Raphael 06511
1954 Laudano, Andrew John, 309 Edwards 06511
1936 Lavietes, Paul Harold, 150 Sargent Dr. 06511
1957 Lavietes, Stanley Robert, 2 Church South 06519
1976 Lavin, William, 111 Park 06511
1949 Lavorgna, Michael Henry, 114 Sherman Ave. 06511
1948 Leavy, Stanley Arnold, 340 Whitney Ave. 06511
1974 Lebson, Robert Edward, 2 Church South 06519
1972 Lee, Keat-Jin, 98 York 06511
1964 Lena, Richard Patrick, 878 Howard Ave. 06519
1957 Lerner, Aaron Bunsen, 333 Cedar 06510
1957 Lerner, Marguerite Rush, 333 Cedar 06510
1923 Levin, Hyman Alexander, 168 Linden 06511
1969 Levine, Ira Richard 65 Trumbull 06510
1974 Levy, Arthur Louis, 60 Temple 06510
1956 Levy, Lewis L., 111 Park 06511
1972 Lewis, Dorothy Otnow, 309 Edwards 06511
1948 Lewis, Herbert Daniels, 111 Park 06511
1961 Lewis, Melvin, 333 Cedar 06510
1952 Lidz, Theodore, 25 Park 06519
1977 Lieb, Julian, 900 Chapel 06510
1951 Lillian, Marvin, 17 Hillhouse Ave. 06520
1961 Lindenmuth, Woodrow Wilson, 333 Cedar 06510
1976 LiVolsi, Virginia Anne, 310 Cedar 06510
1975 Livstone, Elliot Marsh, 333 Cedar 06510
1955 Loewald, Hans W., 65 Trumbull 06510
1927 Logan, William Joseph, 412 Whalley Ave. 06511
1978 Loke, Jacob S.O., 333 Cedar 06510

1972 Lujic, Peter, 1423 Chapel 06511
1976 Lundberg, W. Bruce, 60 Temple 06510

1974 Lynch, James Kevin, 60 Temple 06510
1975 Lynch, Vincent Arthur, 2 Church South 06519
1957 Lynch, William Francis, 1441 Chapel 06511
1963 Lytton, Bernard, 789 Howard Ave. 06504
1973 Magendantz, Henry Guenther, 17 Hillhouse Ave. 06520
1974 Mangi, Richard Joseph, 1450 Chapel 06511
1954 Manheim, Gilbert, 111 Sherman Ave. 06511
1963 Maniatis, William R., 41 Trumbull 06510
1972 Mansourian, Vazrick, 1423 Chapel 06511
1965 Margolis, Robert N., 60 Temple 06510
1963 Mark, Harry Horst, 2 Church South 06519
1946 Marshak, Irving Jacob, 254 College 06510
1967 Mass, Henry, 1552 Chapel 06511
1960 Massie, William Jacko, 288 Dixwell Ave. 06511
1957 Mattie, Louis Ralph, 1471 Chapel 06511
1969 Mattson, Richard Henry, 111 Park 06511
1966 McCarthy, Charles P. N., 2 Church South 06519
1972 McCullough, William Boyd, 2 Church South 06519
1949 McDonnell, Robert Ralph, 1441 Chapel 06511
1974 McFarland, Ward John, Jr., 31 High 06511
1972 McKee, John Braxton, Jr., 58 Trumbull 06510
1975 McLoughlin, Michael Joseph, 1441 Chapel 06511
1947 Meigs, J. Wister, 30 College 06510
1955 Mendillo, John Joseph, 620 George 06511
1949 Michel, Lawrence Irwin, 1539 Chapel 06511
1938 Mignone, Joseph, 1450 Chapel 06511
1942 Millen, Samuel Robert, 545 Dixwell Ave. 06511
1961 Milles, Saul Steven, 100 York 06511
1977 Mitler, Lloyd Kenneth, 428 Columbus Ave. 06519
1955 Moench, John Christopher, 111 Park 06511
1942 Mogil, Marvin, 1481 Chapel 06511
1961 Molumphy, Paul Edward, 860 Howard Ave. 06519
1970 Mombello, Gary Edward, 2 Church South 06519
1930 Mongillo, Frank, P.O. Box 415 06502
1955 Morgan, Walter Sherman, 111 Park 06511
1943 Mott, Frederick Edward, 136 Sherman Ave. 06511
1974 Mujtaba, Qaiyum, 310 Winthrop Ave. 06511
1970 Musto, David Franklin, 333 Cedar 06510
1944 Mylon, Ernst, 358 Central Ave. 06515
1976 Nash, Irwin, Hospital of St. Raphael 06511
1968 Neumann, Hans H., 1 State 06510
1946 Newman, Harry Rudolph, 2 Church South 06519
1957 Niederman, James Corson, 333 Cedar 06510
1955 Nixon, James Thomas, 178 Sherman Ave. 06511
1960 Nolasco, Dario R., 111 Park 06511
1972 Norton, William S., Hospice Inc., 765 Prospect 06511
1974 Noto, Philip John, 1423 Chapel 06511
1962 Nuland, Sherwin B., 60 Temple 06510
1933 O'Brasky, Louis, 123 York 06511
1950 O'Connell, Edward Bernard, 1427 Chapel 06511
1965 Olson, Lowell Eugene, 860 Howard Ave. 06519
1955 O'Neill, John Joseph, 2 Church South 06519
1965 Ornston, Darius Gray, Jr., 255 Bradley 06510
1953 Palluotto, William Vincent, 1488 Chapel 06511
1949 Pantaleo, Carl Vito, 301 Orchard 06511
1951 Parisi, Anthony J., 178 Sherman Ave. 06511
1964 Passarelli, Nicholas Mario, 2 Church South 06519
1976 Pellegrino, Edmund Daniel, 25 Park 06519
1943 Pelliccia, Orlando, Jr., 27 Elm 06510
1956 Perlswig, Ellis A., 30 Bryden Ter. 06511
1975 Petrea, Ion, 123 York 06511
1974 Petrelli, Eligio A., 455 Orange 06511
1927 Petrelli, Joseph, 455 Orange 06511
1977 Petrelli, Richard Lionel, 455 Orange 06511
1946 Petrillo, Charles, 2 Church South 06519
1953 Phillips, Carlton Charles, 2 Church South 06519
1942 Piccolo, Pasquale A., 114 Sherman Ave. 06511
1965 Pickett, Lawrence Kimball, 789 Howard Ave. 06504
1977 Pillsbury, Harold Richard III, 333 Cedar 06510
1976 Pincus, Jonathan H., 333 Cedar 06510
1966 Pinkes, Alexander Herman, 183 Bishop 06511
1977 Pisarczyk, Michael Joseph, 60 Temple 06510
1942 Pitegoff, Charles Haskell, 1395 Chapel 06511
1965 Polayes, Irving Marvin, 60 Temple 06510
1938 Poverman, David, 67 Trumbull 06510
1975 Prokop, Edward Kenneth, Hosp. St. Raphael 06511
1968 Prosnitz, Leonard Richard, 333 Cedar 06510
1977 Pschirrer, A. Richard, 60 Temple St. 06510
1974 Raccuglia, Giovanni, 136 Sherman Ave. 06511
1977 Radoff, Alan Michael 60 Temple 06510
1973 Ragaza, Edgardo Pamintuan, 670 George 06511
1974 Ranieri, Alfred, Jr., 1455 Chapel 06511
1974 Reiser, Morton Francis, 25 Park 06519
1952 Rhoades, Earl James, 111 Park 06511
1924 Riccitelli, Mariano Louis, 121 Fountain 06515
1965 Rifkin, Boris Gershuny, 1488 Chapel 06511
1973 Rigney, Brian Francis, 1450 Chapel 06511
1938 Rilance, Arnold Boon, 2 Church South 06519
1957 Riley, James Albert, 2 Church South 06519
1972 Riordan, Charles E., 100 York 06511
1978 Roberts, David Duke, 98 York 06511
1951 Robinson, Franklin, 60 Temple 06510
1977 Rosenberg, Marc David, 789 Howard Ave. 06504
1964 Rosnagle, Robert Shields, 98 York 06511
1961 Rossi, Joseph Gerald, 17 Hillhouse Ave. 06520
1941 Roth, Oscar, 666 George 06511
1964 Roth, Stanley, 1423 Chapel 06511
1949 Roth, Stefanie Z., 666 George 06511
1941 Rozen, Alan Abraham, 113 Howe 06511
1976 Ruben, Harvey L., 77 Knollwood Dr. 06515
1967 Saccio, Joseph Dominick, 309 Edwards 06511
1975 Sachs, Frederick Lee, Hosp. St. Raphael 06511
1933 Salinger, Robert, 309 Edwards 06511
1974 Sasaki, Clarence Takashi, 333 Cedar 06510
1965 Savin, Ronald Clifford, 123 York 06511
1976 Schachter, Edwin N., Yale-New Haven Hospital 06504
1970 Schapira, Henri Jacques, 2 Church South 06519
1954 Scherr, Edward Howard, 111 Park 06511
1967 Schioppo, Dominic Blace, 1485 Chapel 06511
1976 Scholhamer, Charles Frederick, Jr., 2 Church South 0651
1972 Schowalter, John Erwin, 333 Cedar 06510
1974 Schreiber, Sanford Jay, 251 Edwards 06511
1963 Schrier, Robert I., 789 Howard Ave. 06504
1967 Schwartz, A. Herbert, 175 St. Ronan 06511
1965 Schwartz, Marc David, 26 Trumbull 06511
1975 Schwartz, Morris (Mark) L., 1546 Chapel 06511
1969 Schwartz, Solomon S., 1781 Boulevard 06511
1976 Seah, Cheng-Hock, 1423 Chapel 06511
1977 Seigel, Arthur Michael, 60 Temple 06510
1959 Seligson, David, 789 Howard Ave. 06504
1974 Sella, Enzo John, 60 Temple 06510
1961 Selzer, Richard Alan, 2 Church South 06519
1951 Senn, Milton J. E., 333 Cedar 06510
1949 Shapiro, Robert, 1450 Chapel 06511
1923 Shea, Michael Stephen, 500 Howard Ave. 06519
1974 Shimelman, Myer Morris, 136 Sherman Ave. 06511
1978 Shonk, Carl R., 789 Howard Ave. 06504
1950 Shutkin, Ned Manfred, 2 Church South 06519
1963 Siegel, Bernard Shepard, 2 Church South 06519
1966 Siggins, Lorraine Deirdre, Yale Health Service 06520
1975 Sikand, Rajinder S., Hosp. St. Raphael 06511
1960 Silberstein, Morton Henry, 646 George 06511
1971 Silva, Hernan Rodrigo, 1435 Chapel 06511
1923 Silverberg, Samuel Joshua, 2 Church South 06519
1973 Silverman, Joel Peter, 1423 Chapel 06511
1977 Silverstone, David Edward, 60 Temple 06510
1977 Simonds, Bruce D., 60 Temple 06510
1956 Sirot, Gustave, 2 Church South 06519
1955 Skreczko, Charles Kazimir, 67 Trumbull 06510
1942 Smith, Frederick Francis, 226 Dixwell Ave. 06511
1959 Smith, Howard Willis, 98 York 06511
1977 Smith, Ora L.K., 290 Congress Ave. 06519
1963 Snow, Bernard, 65 Trumbull 06510
1927 Snurkowski, Charles Vincent, 487 Orange 06511

1973 Son, Yung H., 789 Howard Ave. 06504
1958 Southwick, Wayne Orin, 333 Cedar 06510
1939 Spinner, Samuel, 114 Sherman Ave. 06511
1955 Spiro, Howard M., 333 Cedar 06510
1972 Stein, Stephen Alan, 2 Church South 06519
1977 Stepanek, Harold F. Jr., 459 Orange 06511
1960 Stern, Harold, 60 Temple 06510
1974 Stern, Robert, 135 Whitney Ave. 06510
1965 Stern, Stanley, 255 Bradley 06510
1946 Stilson, Carter, 309 Edwards 06511
1974 Stone, Elsa Louise, 708 Orange 06511
1974 Strothers, Gordon, 98 York 06511
1973 Stroup, Ralph Francis, 878 Howard Ave. 06519
1955 Stuermer, Virginia Mae, 2 Church South 06519
1970 Suesserman, Herbert I., 136 Sherman Ave. 06511
1954 Sumner, Martin Leonard, 111 Park 06511
1951 Swan, Bernard Robert, 226 McKinley Ave. 06515
1946 Swift, William Everett, 111 Park 06511
1976 Taub, Arthur, 60 Temple 06510
1978 Timpson, Richard Henry, 206 Dixwell Ave. 06511
1963 Tofig, Rafi, 175 Grand Ave. 06513
1964 Toole, Allan Lawrence, 60 Temple 06510
1947 Tortora, Frank, 620 George 06511
1974 Troncale, Frank Joseph, 2 Church South 06519
1976 Tsai, David Chang-Chur, 428 Columbus Ave. 06519
1963 Turkalo, Jaroslav Konstantin, 100 York 06511
1974 Varrone, John Charles, 181 Edwards 06511
1942 Vegliante, Michael E., 174 Bradley 06511
1941 Vollero, Andrew, 500 Howard Ave. 06519
1978 Wagner, Franklin C., Jr., 333 Cedar 06510
1926 Wakeman, Edward Taylor, 22 Highland 06511
1973 Wartel, Lawrence Jay, 136 Sherman Ave. 06511
1972 Watstein, George Joseph, 123 York 06511
1963 Weil, Ulrich Hans, 60 Temple 06510
1950 Weiner, Joseph, 256 Edwards 06511
1977 Weinstein, Mark H., 60 Temple 06510
1968 Weisinger, Philip I., 100 York 06511
1948 Wessel, Morris Arthur, 878 Howard Ave. 06519
1952 Wexler, Henry, 340 Whitney Ave. 06511
970 White, Augustus Aaron, 333 Cedar 06510
977 White, Robert Edmond, 100 York 06511
977 Wiggins, R. Glen., 60 Temple 06510
968 Wight, Leland Walter, Jr., 116 Sherman Ave. 06511
956 Wilson, George Leman, 670 George 06511
931 Wilson, William Rives, 255 Bradley 06510
975 Wiznia, Robert A., 850 Howard Ave. 06511
969 Wolff, Emanuel Claud, 251 Edwards 06511
954 Wong, Andrew S., 2 Church South 06519
949 Wyatt, Herbert, 135 Whitney Ave. 06510
965 Yanagisawa, Eiji, 98 York 06511
958 Yudkin, Gerald Simeon, 257 Church 06510
971 Zamore, Leonard H., 136 Sherman 06511
952 Zanes, Robert P. Jr., 1395 Chapel 06511
968 Zanker, Theodore, 315 Whitney Ave. 06511
977 Zeff, Arnold Eugene, 26 Trumbull 06511
971 Zonana, Howard Victor, 836 Howard Ave. 06519
957 Zuckerman, Bernard D., 2 Church South 06519

NORTHFORD 06472

977 Jordan, Lee Tyrone, 79 Walnut Lane

NORTH BRANFORD 06471

972 Cheung, Ernest Hang Fai, Foxon Rd., Rt. 80
976 Whelan, Richard Francis, Rt. 80

NORTH HAVEN 06473

977 Ayoub, Joseph E., 94 Washington Ave.
956 Bornstein, Harold David, Jr., 30 Washington Ave.
941 Cashman, Justin Laurence, 11 St. John
974 Christoforo, John M., 59 Quinnipiac Ave.
935 D'Amico, Michael, 411 Middletown Ave.
965 Errico, Austin Virchow, 256 Quinnipiac Ave.
1961 Fanning, James Bernard, 2 George
1961 Ferranti, Redento D., 6 Hilltop Ter.
1972 Freehill, Patrick J., 100 Fitch
1937 Hess, Orvan Walter, 29 Old Orchard Rd.
1976 Ippolito, Raymond Joseph, 6 Lincoln
1924 Jack, John Louis, 1415 Ridge Rd.
1977 Langou, Rene A., 2 Mohawk Dr.
1977 O'Brien, Michael J., 14 Broadway
1940 Parrella, Louis Arnold, 25 Trumbull Pl.
1974 Sokhos, Dimitri Roy, 100 Broadway
1923 Taylor, Sterling Price, 1 St. John

ORANGE 06477

1967 Cohen, Gordon Seth, 328 Ann Rose Dr.
1973 Ephraim, Paul D., 291 Lambert Rd.
1968 Godley, John Allan, 291 Lambert Rd.
1978 Gross, David A., 548 Prudden Lane
1975 Grundy, Gordon William, 291 Lambert Rd.
1970 Kaminsky, David M., 291 Lambert Rd.
1952 Karlovsky, Emil Daniel, 291 Lambert Rd.
1969 Lanzi, Robert Anthony, 291 Lambert Rd.
1972 MacRae, Douglas William, 80 Englewood Dr.
1966 Marieb, Norman Joseph, 266 Hemlock Dr.
1956 Morrison, John Blaisdell, 291 Lambert Dr.
1935 Piazza, George Joseph, 288 Merry Circle
1966 Piotrowska-Nyerick, Krystyna Isabella, 513 Howellton Rd.
1972 Sreenivas, Venkatachala I., 235 Midland
1954 Thompson, Maurice Bainton, 341 Knight La.
1960 Ventimiglia, Joseph J., 105 Laurie La.
1963 Vidone, Romeo Albert, 880 Racebrook Rd.
1967 Vogel, Robert Mannes, 291 Lambert Rd.
1947 White, Robert Morris, 685 Old Grassy Hill Rd.
1971 Zelson, Joseph H., 291 Lambert Rd.

OXFORD 06483

1970 Boissevain, Andre R., 198 Good Hill Rd.
1938 Chobian, Joseph Aloysius, 486 Roosevelt Dr.

PROSPECT 06712

1974 DeNicola, Michael, Union City Rd.
1975 Villa, Alberto, Rt. 69

SEYMOUR 06483

1962 Deduk, Nancy Turner, 17 Westerman Ave.
1962 Deduk, Valentine John, 17 Westerman Ave.
1960 Donnelly, June F., 30 Garden
1970 Harvey, Edward Regis, Jr., 3 DeForest
1934 Rogol, Oscar, 30 Garden

SOUTHBURY 06488

1955 Bernanke, Max, 595A Heritage Village
1972 Forbes, J. Dexter, P.O. Box 50
1978 Grubin, Samuel, 274 B Heritage Village
1977 Hamm, Emile Victor, 101 Union Sq. Mall, Main
1975 Harrison, Stanley Leonard, 1036A Heritage Village
1954 Hart, Henry Harper, Oakledge
1942 Jennes, Milton Leo, 211-A Heritage Village, Southbury 06488
1941 Lee, John Ranks, Heritage Village
1934 McAlenney, Paul Francis, 806B Heritage Village
1971 Mickenberg, Ira D., P.O.Box 446
1959 Raphael, Martha Carola, Main
1976 Rosen, Michael W., P.O. Box 446
1974 Rothstein, David, 912A Heritage Village
1970 Taylor, Marc Jules, P.O. Box 446
1955 VanDerwerker, Earl Edward, Jr., Union Square Prof. Offices
1974 Wheeler, Maynard Cattron, Box 425
1935 Yannet, Herman, 523-B Heritage Village

SOUTH MERIDEN 06450

1955 Klein, Bernard, 244 Main

WALLINGFORD 06492

1947 Boyd, Robert Booth, 25 Fair
1949 Breck, Richard William, 26 Fair
1966 Cirmo, William Francis, 50 South Main
1966 Combs, Jerome Thomas, 50 South Main, P.O. Box 728
1942 Ferguson, James Fulton, Jr., 91 South Main
1956 Fraknoi, Joseph, 101 South Main
1967 Gates, William Leonard, 80 South Main
1912 Goldman, George, Masonic Home
1974 Hofbauer, Henry B., 26 Fair
1975 Kellan, Carl, 50 South Main
1964 Kramer, Bernard, 604 Center
1974 Krc, Eugen,15 South Elm
1974 Manchepalli, Anandarama Setty A., Gaylord Hospital
1947 McGaughey, James David, III, 44 Morningside Ter.
1977 Narayna, Manjula, Gaylord Hospital
1960 Piccirillo, Anthony Vincent, 50 South Main, P.O. Box 728
1956 Plakins, Harold Gregory, 180 Long Hill Rd.
1960 Rathey, Ulrich Klaus, Masonic Home and Hospital
1953 St. James, Alfred Thomas, 181 North Main
1956 Sawicki, Lucian Alex, 153 South Main
1961 Smith, Delbert Beidler, 50 South Main, P.O. Box 728
1931 Spignesi, John Theodore, 393 Center
1974 Strazek, Leslaw M., 1 Signal Hill Rd.

WATERBURY

1961 Abrahamian, H. Arto, 1389 West Main 06708
1975 Abrams, Raymond M., 100 Jefferson Sq. 06706
1971 Amatruda, Thomas T. Jr., Waterbury Hospital 06720
1962 Anderson, Duane Roland, 714 Chase Pkwy. 06708
1973 Anthony, Joseph Robert, 56 Franklin 06702
1954 Audet, Charles Henry, Jr., 3 Second Ave. 06710
1954 Audet, Robert Joseph, 3 Second Ave. 06710
1942 Backhus, Louis Charles, 58 Central Ave. 06702
1974 Baldovi, Victoriano Castillo, Jr., 1389 West Main 06708
1976 Beauchamp, Lawrence Arthur, 89 Willow 06710
1953 Beeble, John, 578 Watertown Ave. 06708
1974 Berg, Gerald, Waterbury Hospital 06720
1960 Bisson, Bertrand Philip, St. Mary's Hospital 06702
1931 Bizzozero, Orpheus Joseph, 134 Grandview Ave. 06708
1968 Bizzozero, O. Joseph, Jr., 134 Grandview Ave. 06708
1950 Blank, Samuel, 951 Chase Pkwy. 06708
1972 Bobowick, Alphonse Roger, 134 Grandview Ave. 06078
1970 Bonaccorsi, Benito Italo, 60 Lakeside Blvd. West 06708
1943 Bonner, Robert Alexander, Jr., 1389 West Main 06708
1977 Borkowski, Henry Jr., 2247 East Main 06705
1972 Brackett, John William, Jr., St. Mary's Hospital 06702
1964 Buckley, Michael Bernard, 1100 Baldwin 06706
1978 Bueno, David, 1389 West Main 06708
1937 Burnham, Bernard Alfred, 324 Highland Ave. 06708
1958 Cappelletti, A. Joseph, 134 Grandview Ave. 06708
1961 Chang, Suk Choo, 1389 West Main 06708
1970 Chavez, Aldo Edmundo, 1389 West Main 06708
1977 Cohen, Ian M., 1039 Chase Parkway 06708
1962 Cohen, William, 475 Chase Parkway 06708
1976 Cohn, Frederick L., 1389 West Main 06708
1942 Coppeto, C. James, 220 East Main 06702
1976 Coppeto, James Robert, 1906 North Main 06704
1942 Coshak, Morris, 58 Holmes Ave. 06710
1928 Cottiero, Thomas, P.O. Box 2246 06720
1947 Cox, Marcus Edward, St. Mary's Hospital 06702
1964 Cutler, Henry Julius, 134 Grandview Ave. 06708
1969 Daly, Joseph Edmund, 1389 West Main 06708
1961 D'Angelo, Daniel A., 636 Plank Rd. 06705
1976 Danielson, Kenneth Sigwald, 1211 West Main 06708
1951 Davie, Robert N., 1211 West Main 06708
1972 de Escobar, Decio Macedo, 29 Central Ave. 06702
1956 Dennen, Philip Cushing, 134 Grandview Ave. 06708
1963 De Petrillo, Bart, 134 Grandview Ave. 06708
1970 Diggs, Andrew Monroe, 106 Grove 06710
1948 DiLorenzo, Salvatore F., 65 Pine 06710
1953 Dingman, Peter Van Cleef, 1211 West Main 06708
1964 Dudzic, Anthony Luke, 1389 West Main 06708
1974 Dunn, Edward, Waterbury Hospital 06720
1972 Dyer, Richard H. Jr., 1211 West Main 06708
1975 Eguia, Jose M., 95 Union 06702
1970 Eisen, Steven L., 1211 West Main 06708
1964 Eslami, Mehdi Saghatol, 1389 West Main 06708
1976 Fabian, Richard Louis, 47 Vernon 06708
1967 Favata, John, 1389 West Main 06708
1974 Feldman, Robert Allen, 1211 Main 06708
1972 Ferraro, Robert William, 636 Plank Rd. East 06705
1937 Finkelstein, William, 195 Grove 06710
1975 Finn, James Edward, 1211 West Main 06708
1974 Fischbein, Charles Alan, 1389 West Main 06708
1964 Fisher, William H. Jr., 1211 West Main 06708
1973 Flint, James Foreman, 134 Grandview Ave. 06708
1952 Francis, Henry Lloyd, 53 Central Ave. 06702
1976 Fuller, Leo Gladstone Anthony, St. Mary's Hospital 067
1959 Gaines, Gail Allyn, 72 Hale 06708
1951 Gedeon, Philip Elias, 301 Highland Ave. 06708
1974 Getnick, Richard Alan, 1211 West Main 06708
1975 Gibney, Raymond A., 100 Jefferson Sq. 06706
1963 Gilbert, Roger Key, Waterbury Hospital 06720
1975 Glassman, Robert Martin, 1389 West Main 06708
1977 Gobbee, Roberto Arturo, 150 Prospect 06702
1951 Good, Philip Snowden, 714 Chase Pkwy. 06708
1949 Good, Robert Childers, 714 Chase Pkwy. 06708
1976 Gotay-Rodriguez, Victor M., 47-51 Vernon 06708
1977 Greco, Thomas Peter, St. Mary's Hospital 06702
1974 Greenberg, Irwin M., Waterbury Hospital 06720
1947 Gualtieri, Michael Vincent, 27 Cooke 06702
1942 Harty, John E., 1389 West Main 06708
1967 Helvie, Henry Eaton, Waterbury Hospital 06720
1930 Herrmann, Albert Edward, 142 Robinwood Rd. 0670
1976 Hersh, Stanley Blair, 1389 West Main 06708
1931 Hetzel, Joseph Linn, 51 Central Ave. 06702
1974 Hoden, Peter David, 134 Grandview Ave. 06708
1967 Hogan, J. Michael, 72 Lakeside Boulevard West 0671
1953 Huber, Herman Crane, Jr., 29 Cliff 06710
1977 Jegathesan, K., 2247 E. Main 06705
1975 Jenusaitis, John Robert, 52 Central Ave. 06702
1956 Karsh, Jamil A., 134 Grandview Ave. 06708
1951 Keet, John Eugene, Southwest Rd. 06708
1966 Keggi, Kristaps Juris, 1211 West Main 06708
1978 Kennealey, Gerard Thomas, 1389 W. Main 06708
1978 Kharma, Khalil M., 1389 W. Main 06708
1974 Kiley, Richard Joseph, 1389 West Main 06708
1944 Koleshko, Lawrence Jacob, 1022 Bunker Hill Ave. 067
1971 Kostecki, Richard Joseph, 1211 West Main 06708
1977 Kraus, Mark Lawrence, 714 Chase Parkway 06708
1974 Kraus, Paul Aaron, 1211 West Main 06708
1940 LaBrecque, Frederick Charles, 151 Grove 06710
1954 Larkin, Charles Lewis, Jr., 1039 Chase Pkwy. 06708
1974 Lee, Kinson, Waterbury Hospital 06720
1976 Lefkowitz, Seymour, 808 Highland Ave. 06708
1976 Lehman, Robert Michael, 100 Jefferson Sq. 06706
1945 Lenkowski, William John, 107 West Ridge Dr. 06708
1974 Lesser, Robert L., 1389 West Main 06708
1941 Lewicki, Edward Stanley, 858 North Main 06702
1977 Lowell, David Maurice, Waterbury Hospital 06720
1971 Loyer, Richard Edward, 1211 West Main 06708
1954 Luria, Sidney Bennett, 134 Grandview Ave. 06708
1976 Lutes, Richard A., 1389 West Main 06708
1976 Lyons, Kathleen Hausmann, Waterbury Hospital 0672
1939 Margolius, Norman Calvin, 1 Eastfield Rd. 06708
1975 Mari, Eduardo Guillermo, 1085 West Main 06708
1948 Marino, Rocco Serefin, 77 Briarcliff Ave. 06708
1971 Marjani, Massoud A., 134 Grandview Ave. 06708
1968 Mascoli, Nicholas Michael, Jr., 1389 West Main 06708
1969 Matyszewski, Stanley Eugene, 64 Robbins 06708
1941 Mayo, Elliot Russell, 129 Prospect 06702

1943 Meo, Richard Carl, 18 Cliff 06710
1941 Merrian, Henry, 134 Grandview Ave. 06708
1961 Miller, Dwight Frank, St. Mary's Hospital 06702
1973 Mirrer, Eugene, 714 Chase Pkwy. 06708
1947 Monagan, Thomas M., 72 Lakeside Blvd., West 06708
1978 Monoson, Peter A., 134 Grandview Ave. 06708
1956 Moore, Edwin Jude Thaddeus, 89 Roseland Ave. 06710
1975 Moynahan, Paula Amelia, 150 Bateswood Rd. 06706
1975 Neibel, Kenneth G., 1389 West Main 06708
1969 Nejame, Franklin Francis, 72 Lakeside Boulevard West 06708
1976 Newman, Richard Joseph, 185 Grove 06710
1966 Nezhad, F. Manouchehr, 134 Grandview Ave. 06708
1959 Nunes, Manuel, 10 Second Ave. 06710
1952 O'Brien, Francis Hefler, 1211 West Main 06708
1948 Olore, Louis, 47 Prospect 06702
1975 Osborn, Dana John, 134 Grandview Ave. 06708
1969 Ostrov, Melvyn R., 475 Chase Pkwy. 06708
1976 Palesty, John, 911 Country Club Rd. 06708
1942 Pasetto, Edo, 1183 Hamilton Ave. 06706
1978 Perlman, Elliot Mark, 134 Grandview Ave. 06708
1975 Peterson, Walter Scott, 134 Grandview Ave. 06708
1970 Piscatelli, Robert Louis, St. Mary's Hospital 06702
1975 Posada, Humberto, 1389 West Main 06708
1975 Poupko, Gary G., 34 Collins 06704
1975 Preston, Nicholas, 134 Grandview Ave. 06708
1974 Querijero, Gerardo Barcenas, 1389 West Main 06708
1968 Quigley, William Frederick, 195 Grove 06702
1974 Ranish, Melvin, 475 Chase Parkway 06708
1964 Reed, David Pardee, 1389 West Main 06708
1941 Reichenbach, Alfred Edelbert, 134 Grandview Ave. 06708
1975 Renda, Joseph L., 134 Grandview Ave. 06708
1939 Reynolds, Joseph Alban, 54 Central Ave. 06702
1974 Richards, Norman R., 335 Meriden Rd. 06705
1971 Robitaille, George A., 56 Franklin 06702
1974 Romero, Roberto Orduna, 450 Meriden Rd. 06705
1958 Rosenbaum, Haskell M., 1389 West Main 06708
1976 Rosenberg, Barry Steven, 1389 West Main 06708
1974 Rost, Dwight Murray, Waterbury Hospital 06720
1976 Rothfeld, Philip M., 951 Chase Pkwy. 06708
1974 Rozycki, Jan S., 1389 West Main. 06708
1975 Rubenstein, Stephen Robert, 192A Kaynor Dr. 06708
1925 Ruby, Max H., 170 Hillside Ave. 06710
1939 Ruby, Robert J., 170 Hillside Ave. 06710
1975 Ruszkowski, Ronald Joseph, 134 Grandview Ave. 06708
1952 Ryan, Sylvester James, 95 Union 06702
1970 Sangree, Milton Huyett, Jr., Waterbury Hospital 06720
1975 Santopietro, Olindo Oreste, 714 Chase Pkwy. 06708
1975 Savarese, Edgar Cunningham, 714 Chase Pkwy. 06708
1939 Sayers, Daniel O'Connell, 132 Eastfield Rd. 06708
1964 Segall, Edward Marvin, 195 Grove 06710
1974 Shapiro, Michael Mark, 63 Central Ave. 06702
1971 Sharian, Kent Edward, 1389 West main 06708
1933 Shea, Vincent Timothy, 90 Tower Rd. 06710
1972 Shea, Vincent Timothy, Jr., 95 Union 06702
1960 Shealy, A. Creig, 1039 Chase Parkway 06708
1948 Shearer, John Kennedy, 1211 West Main 06708
1972 Sherman, Joel Avery, 195 Grove 06710
1958 Sirica, Alphonse Eugene, 185 Columbia Blvd. 06710
1965 Sirop, Paul Arthur, 195 Grove 06710
1978 Sivaloganathan, Subramaniam, 714 Chase Pkwy. 06708
1941 Sklaver, Joseph, 95 North Main 06702
1946 Smith, Jasper Archer, 134 Grandview Ave. 06708
1976 Stahl, Allan Jeffrey, 60 Lakeside Blvd. W. 06708
1955 Standard, John Edward, 1211 West Main 06708
1977 Stein, Stephen, 134 Grandview Ave. 06708
1975 Sterling, Anthony Paul, 1127 West Main 06708
1954 Stocking, Anson Gilbert, 30 West Main 06702
1952 Sturman, Robert Harris, 1211 West Main 06708
1946 Sullivan, Arthur Francis, 493 Willow 06710
1973 Sullivan, Raymond Eugene, 1211 West Main 06708
1964 Summa, John Francis, 134 Grandview Ave. 06708
1975 Taube, Steven Lawrence, 64 Robbins 06708
1975 Teeking, Plaridel Sta. Teresa, 1389 West Main 06708
1947 Teiger, Paul, 1389 West Main 06708
1971 Thornton, George Fred, Waterbury Hospital 06720
1972 Toffler, Robert B., Waterbury Hospital 06720
1960 Tormo, Vicente, 1389 West Main 06708
1966 Traurig, Allen Robert, 1211 West Main 06708
1960 Valentine, George William, 1389 West Main 06708
1958 Veiga, Adriano Seabra, 1389 West Main 06708
1975 Villaluz, Erlinda, Santos, 72 Lakeside Blvd. W. 06708
1974 Villaluz, Jose Reallista, Jr., 54 Central Ave. 06702
1975 Villar, Romulo Loyola, 1389 West Main 06708
1970 Vincitorio, Joseph Alexander, 95 Union 06702
1975 Waldman, Nancy, 134 Grandview Ave. 06708
1942 Wallach, Gert M.K., Dir. of Health, City of Waterbury 06720
1959 Warren, Philip, 1389 West Main 06708
1976 Wasilauskas, Victor P., 175 Grove 06710
1954 Weisberg, Herbert Edward, 63 Central Ave. 06702
1977 Wells, Andrew Curtin, 163 Grove 06710
1966 Wihbey, Joseph George, 134 Grandview Ave. 06708
1975 Winograd, Jeffrey, 100 Jefferson Sq. 06706
1956 Wohlgemuth, Paul Robert, 1211 West Main 06708
1949 Yavetz, Louis Milton, 134 Grandview Ave. 06708
1975 Youngberg, Arne S., 134 Grandview Ave. 06708
1968 Zucker, Leon, 115 South Main 06702

WEST HAVEN 06516

1975 Beck, John Edwin, 400 Morgan La.
1958 Brodoff, Murray, 385 Main
1938 Chasnoff, John Arthur, 328 Main
1943 Cozzolino, Eugene Norris, 640 Savin Ave.
1958 Day, Edward John, 609 Savin Ave.
1976 De Jesus, Cesar P.V., Veterans Administration Hospital
1954 deSuto-Nagy, Gyula Il, Veterans Administration Hospital
1951 Dzubaty, Michael, 522 Ocean Ave.
1974 Errera, Paul, Chief Psychiatry Service, Veteran's Administration Hospital
1976 Etkin, Thomas Howard, 377 Main
1930 Harris, Benedict Richard, c/o Sound View Specialized Care Center
1971 Hourihane, Mortimer John, 385 Main
1960 Hurowitz, Robert Boyd, 285 Main
1966 Job, Gil Guion, 32 Priscilla Rd. 06515
1967 Kinstlinger, Robert, 385 Main
1975 Liebowitz, Meyer, 141 Capt. Thomas Blvd.
1965 Loh, Hsing Cheng, Veterans Administration Hospital
1974 Lyons, William Bernard, Veterans Administration Hospital
1930 Milano, Nicholas Antonio, 271 Elm
1947 Milici, John Joseph, 354 Campbell Ave.
1976 Nocks, James Jay, Veterans Administration Hospital 06516
1962 Rocco, Anthony Rudolf, 415 Main
1955 Tierney, Lawrence Matthew, 246 Elm
1947 Yesner, Raymond, Veterans Administration Hospital

WOLCOTT 06716

1940 Damiani, Rudolph Andrea, Rose Hill
1928 Morrill, Harold Frost, 133 Wolcott Rd.
1957 Rofrano, Douglas Anthony, 30 Beach Rd.
1973 Walshe, Thomas Eric, 509 Wolcott Rd.
1946 Whalley, Evan Joseph, 76 Pratt Lane

WOODBRIDGE 06525

1961 Bradley, Raymond Edgar, Jr., 20 Center View Rd.
1948 Brockway, Dorothy W., Old Mill Rd.
1951 Fuhrmann, Josephine Marie, North Pease Rd.
1937 German, William John, Johnson Rd.
1941 Godfried, Milton S., 54 South Pease Rd.
1967 Goffinet, Sara Beatty, 17 Deepwood Rd.
1958 Herbordt, W. Alexander, 30 Orchard Rd.
1949 Keller, Florence, 264 Amity Rd.
1971 Kondo, Koretada, 6 Wepawaug Rd.
1952 Lidz, Ruth Wilmanns, Orchard Rd.
1973 Milano, Ann F., 26 Dillon Rd.
1935 Newman, Richard, Old Racebrook Rd.
1947 Root, James Harold, Jr., P.O. Box 3907
1946 Taffel, Max, Seymour Rd.
1954 Treder, Frederick Henry, Center Rd.

WOODMONT 06465

1976 Fugal, Jan Peter, 1556 New Haven Ave.

YALESVILLE 06494

1954 Dickinson, William Wells, 63 Hill Ave.

OUT OF COUNTY

1957 Anderson, Harold Clifford, Syntex Corp., 3401 Hillview Ave., Palo Alto, California 94304
1976 Archer, Girvice W., Jr., Burlington Rd., Harwinton 06790
1973 Arnold, Philip Bruno, Danbury Hosp., Danbury 06810
1961 Atoynatan, H. Tanash, 317 North Main, Manchester 06043
1961 Bensch, Klaus G., Stanford Un. School Med., Stanford, California 94305
1961 Benton, Philip Eglin, Box 241, Barley Neck Rd., Orleans, Massachusetts 02653
1978 Berenbaum, Paul Lawrence, 1002 Spruce, Philadelphia, Pennsylvania 19107
1939 Bishop, Courtney Craig, Gilfeather Farm, Wardsboro, Vermont 05355
1927 Blodinger, Israel Edward, 2121 N. Ocean Blvd., Boca Raton, Florida 33432
1956 Bradley, William Richards, One American Row, Hartford 06115
1961 Brigham, John Charles, 17 Johnson Ave., Hudson, Massachusetts 01749
1958 Cary, James Martin, 181 East Cedar, Newington 06111
1976 Castro, Raymond A., Wagon Wheel Rd., Durham 06422
1946 Clarke, Winthrop Irving, 141 Sea Isle Circle, South Daytona, Florida 32019
1974 Collins, James Thomas, Jr., 5000 W. Oakland Park Blvd., Fort Lauderdale, Fla. 33313
1943 Conway, David Francis, Jr., Apt. 119, Oakford Glen, R.D.4, Clark Summit, Pa. 18411
1943 Curtis, William Boyd, 108 N. Gordon Rd., Fort Lauderdale, Florida 33301
1956 Czarsty, Joseph Charles, 314 Main, Oakville 06779
1958 Davis, Clarence Daniel, 17439 Plaza Dolores, Rancho Bernardo, California 92128
1939 Davis, Jachin Boaz, 120 Chartwell Rd., Columbia South Carolina 29210
1976 Dean, Richard John, 401 Thorncliff Rd., Fayetteville, North Carolina 28303
1951 Delgrego, Arthur L., 928 S.W. 5th, Boca Raton, Florida 33432
1976 Ecker, Martin D., 209 Shelter Rock Rd., Stamford 06903
1960 Fanslow, Allen Woodward, 31 Bridgeview Pl., Stratford 06497
1953 Fierman, Louis B., 25 Marlborough, Portland 06480
1926 Fitzpatrick, Edward Earl, 317 36th Ave., N.E., St. Petersburg, Florida 33704
1927 Foster, John Hess, Riverview Manor, UMH, Lewisburg, Pennsylvania 17837
1966 Hellman, Samuel, Joint Center for Radiation Therapy, Boston, Mass. 02115
1977 Hong, Cornelio R., 26 Lafayette, Norwich 06360
1966 Hook, Robert, Institute of Living, Hartford 06106
1946 Howard, Weaver Oscar, 195 Parkview Ter., Orange, New Jersey 07050
1971 Hurst, Victor Waldemar, III, Shag Bark La., Woodbu 067
1955 Jaeger, Carl Alphonse, 4 Dearfield Dr., Greenwich 068
1976 Jilani, Ghulam, 49 DeForest, Watertown 06798
1975 Klingler, Stephen York, 12 Knoll Rd., Woodbury 067
1936 Klumpp, Theodore George, 90 Park Ave., New York, N. 1001
1977 Koneswaran, Murugesapillai, 21 Huntington Pl., Shelto 064
1978 Koneswaran, Saroja, 21 Huntington Pl., Shelton 06484
1972 Krizek, Thomas Joseph, Columbia Pres. Med. Ctr., Ne York, N.Y. 10032
1946 Kunkel, Paul, 30 Hospital Ave., Danbury 06810
1971 Langner, Joseph Morton, 201 Main, Southington 064
1943 Lencz, Erwin D., 1500 Bay Rd., Miami Beach, Florid 3313
1955 Licht, Sidney, 4601 Univ. Dr., Coral Gables, Florida 3314
1976 Maningas, Antonia Lorenzo, 60 Valley View, South Windsor 06074
1963 Marsh, Catherine Ohlandt, 181 Westmont, West Hartfor 0611
1962 Marsh, Spinks Hamilton, 85 Jefferson, Hartford 061
1955 Martin, Waldo Emerson, 507A Iroquois La., Strafor 0649
1934 Mekrut, Joseph Anthony, 1506 Danbury Dr., Sun Cit Center, Florida 33570
1973 Milano, Madelyn Frances, 19 Hurd Bridge Rd., Clinto 0641
1958 Mooney, James Patrick, Philips Medical Systems, Inc Shelton 06484
1960 Morrissey, Vincent J., 6 Bluewater La., Westport 06880
1958 Opsahl, Jeanette C., Sheraton Plaza, Boston, Mass. 0211
1921 Otis, Fessendon Newport, 21 Guernsey Rd., Bloomfiel 0600
1968 Ozenberger, James Milton, Boston Post Rd., (18 We Main) Clinton 06413
1971 Palm, Carlton Robert, 30 Peck Rd., Torrington 067
1973 Pardi, Victor Morris, Ct. Gen'l. Life Ins. Co., B-2 Hartford 06115
1968 Pascale, Jane Fay, 108 Chasewood Lane, East Amhers New York 14051
1946 Pasternak, Maxwell, 2425 Gulf of Mexico Dr., Longboa Key, Florida 33548
1940 Pelz, Kurt S., 16 Sol's Point Rd., Clinton 06413
1955 Pilot, Martin Lewis, 518 Riverside Ave., Westport 0688
1952 Pious, William Leon, 715 San Juan, Clewiston, Fla. 33440
1943 Redlich, Frederick C., Brentwood V.A. Hospital Los Angles, California 90073
1973 Riemer, Hans Otto, Laurel Heights Hospital, Shelton 0648
1960 Rinaudo, Peter A., 59 Skyview Dr., Berlin 060
1949 Riordan, William Darling, 40 Braeburn Rd., We Hartford 06117
1966 Roach, Donald Patrick, 408 Howe Ave., Shelton 0648
1931 Sandulli, Gaetano Renato, 212 Middlebury Rd., Wate town 06795
1975 Seliger, Gustav, 394 West Ave., Norwalk 06850
1951 Spencer, Leon O., 410 42nd Ave. North, Myrtle Beac South Carolina 09577
1976 Taylor, Richard Norvell, Jr., 70 Heminway Park Rd Watertown 06795
1954 Vileisis, Vita, Ben Sherman Hill, Woodbury 06798
1933 Zimmerman, Harry Martin, Montefiore Hospital, Bron New York 10467

New London County Association

President: **Fred A. Anderson**, 7 Clinic Dr., Norwich 0636

President Elect: Jerome Bobruff, 268 Montauk Ave., New London 06320
Vice-President: Frederick C. Barrett, 108 New London Tpke., Norwich 06360
Secretary-Treasurer: Kathryn E. Verie, 159 Ocean Ave., New London 06320
Councilor: Charles M. Krinsky, 27 Broad, New London 06320
Associate Councilor: Frederick C. Barrett, 108 New London Tpke., Norwich 06360
Annual Meeting, First Thursday in April
Semi-Annual Meeting, First Thursday in October

COLCHESTER 06415

956 Conrad, Carl Casper, 24 Norwich Ave.

GALES FERRY 06335

971 Engelke, Harold August, Medical Arts Building, R.F.D. No. 12
974 Long, Dennis Sage, R.F.D. 3, Box 309
977 Rinzler, David Michael, Rt. 12 Torrey Park

GRISWOLD

Jewett City 06351

956 Gosselin, Albert George, 65 Brown Ave.

GROTON

975 Barri, Anthony R., 317 Long Hill Rd. 06340
955 Brown, Walter McKeand, 295 Long Hill Rd. 06340
953 Force, Berwyn Rodney, 272 Thames 06343
975 Heller, Stephen Frederick, 167 Broad 06340
970 Hollister, James Malcolm, 167 Broad 06340
969 Knirsch, Anthony K., Pfizer Inc. 06340
946 MacDougall, A. Duncan, 174 Bridge 06343
961 Soriano, Ernesto Reyes, 1064 Poquonnock Rd. 06340
944 Sutton, Paul, 174 Bridge 06340

HADLYME 06439

33 Wilson, George Campbell, Box 98

EAST LYME 06333

78 Brent, Richard Louis, 4 Legendary Rd.
70 Edgar, Edward E., Black Oak Dr.
77 Shaw, Gerald Lee, 23 Church Lane
77 Vickerman, Robert Lynn, 5 Church Lane

JEWETT CITY 06351

78 Akus, Jan J., 65 Brown Ave.

LEDYARD 06339

77 Gates, Peter Joseph, 20 Marla Ave.
68 Marshall, David Charles, 515 Pumpkin Hill Rd.

LYME 06371

27 Ely, Julian Griffin, R.F.D. No. 2
75 Stanberry, Mark Chauncy, Joshua Lane, RFD 2

MYSTIC 06355

57 Barry, Richard M., Sandy Hollow Rd.
74 Brensilver, Howard L., Sandy Hollow Rd.
50 Edmonstone, William Mason, 102 Library
76 Freye, Henry B., 46 Greenmanville Ave.
77 O'Brien, Mark M., Box 422, R D 1
75 Plankeel, John P., 3 Prospect
75 Pukay, Boris, 21 East Main
73 Schmidt, James Lee, Box 38
58 Sproul, Lyman Edwin, Sandy Hollow Rd.

NIANTIC 06357

1975 Barrera, Alberto M., 308 Main
1951 Hall, Mary Nettleton, 88 Smith
1954 Kramm, William Amede, Hope
1976 Palker, Neil A., 16 Laurel Hill Dr., So.
1972 Young, Daniel David, 22 Pennsylvania Ave.

NEW LONDON 06320

1970 Adams, Gene Roger, 276 Montauk Ave.
1950 Atwood, Albert Sterling, Lawrence Memorial Hospitals
1956 Beatman, Bernard, 34 Channing
1957 Bedrick, Morton, 345 Montauk Ave.
1976 Benton, Richard Philip, 150 Ocean Ave.
1963 Bobruff, Jerome, 268 Montauk Ave.
1971 Brown, Henry, 350 Montauk Ave.
1969 Burton, George, 488 Montauk Ave.
1960 Cavicke, David Conrad, 350 Montauk Ave.
1977 Cazenave, Hector, 203 Montauk Ave. 06320
1970 Clayton, Edwin Martin, Lawrence & Memorial Hospitals
1977 Colom, William Anthony, 447 Montauk Ave.
1961 Cooper, Donald Wesley, 350 Montauk Ave.
1958 Coulson, Louis Anthony, 397 Ocean Ave.
1972 Derby, James Hart, 41 Faire Harbour Pl.
1949 Dey, Frederick Lemuel, 464 Ocean Ave.
1931 Dyer, Charles Edward, 297 Montauk Ave.
1954 Dyer, Charles Frederick, 327 Montauk Ave.
1948 Ellison, Malcolm Mitchell, 328 Montauk Ave.
1947 Fagan, Frederick J., 19 Glenwood Ave.
1964 Fleisher, Paul Robert, 435 Montauk Ave.
1965 Foss, Beverly Ann, 325 Montauk Ave.
1977 Fraser, Richard A., 350 Montauk Ave.
1958 Fulchiero, Egidio, Lawrence & Memorial Hospitals
1966 Gaito, Raymond Arthur, 464 Ocean Ave.
1954 Gerity, Paul Joseph, 465 Montauk Ave.
1971 German, John Nixon, 350 Montauk Ave.
1934 Gipstein, Edward, 175 Parkway North
1961 Graham, Roger A., 302 Montauk Ave.
1947 Haines, Henry Lippincott, 464 Ocean
1939 Hartman, Frederick Brittinger, 342 Montauk Ave.
1958 Hayes, David, Lawrence & Memorial Hospitals
1934 Henkle, Robert Theodore, 132 Ocean Ave.
1965 Hostnik, William John, 280 Montauk Ave.
1974 Immordino, Peter Anthony, 154 Broad
1966 Johnson, Howard King, Jr., 488 Montauk Ave.
1966 Johnson, Mary Ellen, 488 Montauk Ave.
1956 Jones, William Nicholas, 41 Faire Harbour Pl.
1974 Jung, Robert Marc, 41 Faire Harbour Pl.
1961 Kaplan, Donald H., 345 Montauk Ave.
1962 Karno, Martin Louis, 270 Montauk Ave.
1972 Kim, C. Albert, Lawrence & Memorial Hospitals
1972 Klimek, Robert J., 154 Broad
1940 Krinsky, Charles Morris, 27 Broad
1958 Kuhn, Herbert Ray, 425 Montauk Ave.
1975 Kwee, Hing Sin, Lawrence & Memorial Hospitals
1962 Leib, Dorothy Baird, 429 Montauk Ave.
1962 Leib, Gilbert Middleton Patten, 447 Montauk Ave.
1953 Lena, Hugh F. Jr., 154 Broad
1947 Loiacono, Richard A., 464 Ocean Ave.
1953 Longo, Vincent Joseph, 437 Montauk Ave.
1936 Lubchansky, Jacob Harris, 27 Broad
1976 Madsen, John E. Jr., 268 Montauk Ave.
1976 Makover, Richard, 342 Montauk Ave.
1970 Marchand, Gilles Alfred, 425 Montauk Ave.
1957 Mariani, Roland A., 280 Montauk Ave.
1964 Marx, Frank George, 425 Montauk Ave.
1949 McFarland, Ward John, 833 Ocean Ave.
1976 McKeehan, Frederick Romer, Conn. College
1968 Moalli, Daniel Edward, 350 Montauk Ave.
1964 Molloy, Peter Myers, Lawrence & Memorial Hospitals

1966 Morse, Willard Jackson, Jr., 391 Ocean Ave.
1974 Murphy, Arthur Gordon, Connecticut College
1952 Murray, Joseph Thomas, 342 Montauk Ave.
1953 Murray, William John, Jr., 447 Montauk Ave.
1946 Nielsen, Tage M., 159 Ocean Ave.
1951 Olsen, Robert Clarence, 496 Montauk Ave.
1973 Pascual, Rafael S., 391 Ocean Ave.
1976 Pembrook, Richard Charles, 471 Montauk Ave.
1963 Peterson, David M., 342 Montauk Ave.
1955 Prokesch, Clemens Elias, 435 Montauk Ave.
1977 Reich, Louis Henry, 292 Montauk Ave.
1976 Reilly, John Joseph, 154 Broad
1968 Robinson, Charles H. Jr., 276 Montauk Ave.
1974 Roe, Charles Francis, 467 Montauk Ave.
1975 Rosenblum, Robert Alan, 345 Montauk Ave.
1952 Saxe, Louis Philip, 341 Montauk Ave.
1973 Schmidt, C. William, 350 Montauk Ave.
1960 Scholz, Horst Dieter, Lawrence & Memorial Hospitals
1974 Shah, Jyotsna R.C., Lawrence & Memorial Hospitals
1975 Silver, Stephen Euric, 271 Montauk Ave.
1949 Spitz, Hilliard, 447 Montauk Ave.
1971 Sprafke, Donald Francis, 41 Faire Harbour Pl.
1965 Sprecace, George Alcide, 248 Montauk Ave.
1974 Stein, Sigmund Charles 276 Montauk Ave.
1940 Sulman, Morris, 203 Montauk Ave.
1974 Sutphen, John Hayes, Lawrence & Memorial Hospitals
1933 Taylor, Robert Nelson, 159 State
1963 Tighe, John Anthony, 419 Montauk Ave.
1977 Toledo, Antonio C., 391 Ocean Ave.
1947 Verie, Kathryn E., 159 Ocean Ave.
1960 Wade, Philip Barry, 275 Montauk Ave.
1950 Warnshuis, Lilian Cook, 25 Thames
1932 Wener, William Victor, c/o Levinson, 917 Montauk Ave.
1935 Wies, Carl Hendricks, 115 Huntington
1951 Wood, Dwight Reynolds, 358 Montauk Ave.
1947 Wool, Joseph M., 271 Montauk Ave.
1972 Yoselevsky, Melvin Arnold, 334 Montauk Ave.

NOANK 06340

1974 Andrews, William Baird, 107 Seneca Dr.

NORWICH 06360

1974 Ahamed, Sultan, 120 Lafayette
1946 Albamonti, Mario John, 100 Fanning Ave.
1950 Allen, Joseph Eugene, 11 Woodrow Ave.
1950 Anderson, Fred Andrew, 7 Clinic Dr.
1950 Anderson, Ruth Messer, 15 Butternut Dr.
1967 Andrews, Ralph Colvin, 16 Franklin
1933 Archambault, Henry Allard, 18 Wayne
1959 Balfour, James Douglas, William W. Backus Hospital
1950 Barrett, Frederick Charles, 108 New London Tpke.
1969 Bergendahl, Gilbert Thomas, 120 Lafayette
1935 Bergendahl, Harold Andrew, 120 Lafayette
1973 Betten, Michael Gerald, 12 Case
1942 Bielecki, Casimer Eugene, 120 Lafayette
1962 Browning, S. Pearce, III, 5 Case
1959 Carter, Frank James, 120 Lafayette
1959 Carter, Marie Kernan, 185 Broadway
1965 Coletti, Larry, 108 New London Tpke.
1964 Cook, Thomas Jackson, 57 Lafayette
1977 Coric, Vladimir, Norwich Hospital
1960 Costa, Pasquale James, 108 New London Tpke.
1966 Cranston, Robert W. Jr., 43 Ox Hill Rd.
1978 Crootof, Robert Eric, 159 Sachem
1974 de Groot, Theodore J., 53 Lafayette
1942 Drobnes, Sidney, 24 Sachem
1956 Eadie, Frederick Stearns, 120 Lafayette
1969 Edgar, Malcolm S. Jr., 2 Clinic Dr.
1975 Esfahanian, Sa-id, 326 Washington
1977 Flanagan, George Meade, Uncas-on-Thames Hospital
1976 Friedman, Franklin Paul, 12 Case
1974 Gilmartin, Daniel, 117 Mediterranean Lane
1958 Glenney, Christopher Courtney, 2 Clinic Dr.
1975 Goldblatt, Jeffrey Stuart, 121 Lafayette
1966 Greene, Leonard Albert, 120 Lafayette
1962 Griffin, J. Clement, 12 Case
1948 Guss, Louis, 59 Sachem
1954 Harkins, James Anthony, 12 Case
1935 Higgins, Harold William, 7 Clinic Dr.
1962 Joseph, Julien L., Scotland Rd., R.F.D.
1971 Kadish, Joan Alice, William Backus Hospital
1971 Kadish, Manuel Edgar, Brown School Rd., R.F.D. No.
1960 Kalams, Zannis Spiros, 12 Case
1974 Kantharaj, Adisayam Joseph, 80 Sherman
1947 Katz, Morris E., 108 New London Tpke.
1954 Kelleher, James H., 100 Fanning Ave.
1946 Kelley, Winfield Orthello, 11 Butternut Dr.
1967 Kerrigan, Robert, 87 Lafayette
1962 Kropp, Peter Johann, 24 Sachem
1966 Langhammer, Hans, Norwich State Hospital
1947 LaPierre, Arnaud Rogers, 5 Clinic Dr.
1949 LaPierre, Warren Winthrop, 5 Clinic Dr.
1974 Lee, Woong B., 57 Lafayette
1978 Lee, Yil Sun C., 80 Sherwood Lane
1974 Lesnik, Thomas H., 119 Lafayette
1950 Lord, Benjamin John, Jr., 120 Lafayette
1936 Mahoney, Joseph John, 120 Lafayette
1975 Mandell, Harvey N., William Backus Hospital
1954 Manning, Imogene Hopkins, 120 Lafayette
1947 Martin, John Edward, Clinic Dr.
1967 Martin, Morgan Graham, P.O. Box 508
1955 Masterson, Thomas Joseph, 2 Clinic Dr.
1967 McKeon, William Francis, 148 Sachem
1977 McNamara, Thomas Clinton, 148 Sachem
1951 Morrison, John Edward, 11 Lincoln Ave.
1976 Oakley, David Edward, 12 Case
1935 O'Connell, Patrick Henry, 10 Shetucket
1978 Okasha, Mahmoud S., 12 Case
1959 O'Toole, Peader, P.O. Box 508
1947 Phillips, Nicholas T., 12 Case
1978 Podurgiel, Bernard J., 120 Lafayette
1973 Powell, Bernardo, Norwich State Hospital
1972 Prioli, Katherine M., 92 New London Tpke.
1934 Quintiliani, Albert, 58 Broadway
1976 Richeimer, William George, 2 Clinic Dr.
1973 Rosenberg, Peter J., 159 Sachem
1948 Santiccioli, Aldo Bruno, 5-4 Sheraton Lane
1964 Saracino, Luigi, Norwich Hospital
1954 Sawyer, James David, 12 Case
1942 Schwarz, H. Peter, 120 Lafayette
1968 Sculco, Mario, 120 Lafayette
1935 Sears, Lewis, 257 Main
1938 Segel, Solam, 159 Sachem
1976 Snyder, Ronald Eugene, 92 New London Tpke.
1968 Solomon, Morton, Town at Washington
1966 Songco, Mariano, F., 16 Franklin
1974 Springer, Gerald L., 326 Washington
1929 Suplicki, John William, 257 Main
1968 Taylor, K. Stephens, 57 Lafayette
1963 Torres, Clemencio Bautista, 108 New London Tpke.
1963 Tramontozzi, Anthony Daniel, 108 New London Tpke.
1976 Wahba, Hany Said, 12 Case
1955 Ward, Franklyn Pennington, 117 Lafayette
1976 Watson, James Earl, 159 Sachem
1953 Wilson, Clifford Edward, 12 Case

OLD LYME 06371

1971 Borger, Allen Paul, Old Cart Path
1963 Brubaker, Robert Erb, R.D. #3
1963 Dorantes, Joaquin, Saunders Hollow
1962 Friedmann, Karl R., Boston Post Rd.
1973 Griswold, Matthew, P.O. Box 206
1967 Hackbarth, Clifford James, Boston Post Rd.
1977 Kundrat, Gregory John, Boston Post Rd.
1977 Solin, Michael Edward, Boston Post Rd.

QUAKER HILL 06375

1970 Rablen, Elizabeth Charlotte, 40 Old Norwich Rd.
1929 Starr, Richard Mallory, 7 Best View Rd.

SALEM 06415

1971 Bender, Louis, 11 Pleasant View Rd., R D 3
1974 Bingham, David Brewster, White Birch Rd.

SOUTH LYME 06376

1972 Glasser, Samuel Thomas, P.O. Box 75

STONINGTON 06378

1975 Pitts, Norman E., R.F.D. #1, Box 69-D
1975 West, Edmund Anthony P., Box 266

TAFTVILLE 06380

1949 Rousseau, David George, 4 North Second Ave.

UNCASVILLE 06382

1949 Miselis, Frank Joseph, 221 Norwich-New London Tpke.
1929 Rasmussen, Hans Norman, 92 Depot Rd.

WATERFORD 06385

1962 Behringer, Frederick Rudolph, 14 Susan Ter.
1965 Ellis, Grace Davis, 214 Niantic River Rd.
1936 Ferguson, Helen Knox, 172 Niantic River Rd.
1963 Palmer, Walter M., 8 Leary Dr.
1967 Rabinovitch, Peter I., 210 Boston Post Rd.
1976 Raphan, Harvey, 4 Jonathan Law Ct.
1974 Srinivas, Ratna Ragunath, 53 Colonial Dr.
1978 Taylor, Colin Ross, 4 Baldwin Drive

OUT OF COUNTY

1972 Aromin, Salvador C., 112 Old Plainfield Rd., Moosup 06354
1951 Birchall, Ellen Frances, 1103 Holcomb, Watertown, New York 13601
1962 Corazzelli, Frank George, Jr., 60 Canterbury Lane, Trumbull 06611
1966 Cuello, Rafael A., Bridgeport Hospital, Bridgeport 06610
1974 Dickson, Harrison McCrea, Box 2 Disp., USCG Support Center, Kodiak, Alaska 99615
941 Fowler, Roger N., 205 Heather La., Ramsey, New Jersey 07446
968 Gilgore, Sheldon G., 9 Rockwell Lane, Darien 06820
935 Hale, Virginia Anne, Bay Village, 8400 Jamo Rd. Sarasota, Florida 33581
978 Hanna, Mary Moawad, 2760 Victory Blvd., Staten Island, N.Y.10314
968 Harrison, Milton, 145 Pago Pago Dr., Naples, Florida 33940
936 Irwin, Harold Hyman, 1402 N.W. 80th Ave., Margate, Florida 33063
975 Lamb, Elizabeth S., 96 Norwood Rd., West Hartford 06117
928 Mills, Bernard, Litchfield, 25200 Rockside Rd., Apt.730, Bedford Heights, Ohio 44146
937 Moore, Maurice R., 3601 Deep Creek Dr., Spring Hill, Florida 33512
934 Morse, Willard Jackson, 452 Lighthouse Way, Box 306, Sanibel, Florida 33957
961 Nelligan, David Joseph, Magna La., Westbrook 06498
962 Olejnik, Waclaw, P.O. Box 351, Middletown 06457
1921 Sussler, David, 2560 S. Ocean Blvd., Palm Beach, Florida 33480
1951 van Dyk, Arnulf R., 2715 Ordway, Washington, D.C. 20008
1965 Wierzbinski, Joseph Paul, 517 Laurel Ave., Menlo Park, California 94025

Tolland County Association

President: Marion A. Warpinski, Rt. 198 Woodstock Valley 06282
Vice-President: Benjamin Adamo, 57 Union, Rockville 06066
Secretary-Treasurer: Marjorie A. Purnell, 23 Davis Ave., Rockville 06066
Councilor: Norman A. Zlotsky, 23 Elm, Rockville 06066
Associate Councilor: Victor G. Sonnen, 59 Broad, Brook Rd., Enfield 06082
Annual Meeting, Third Tuesday in March
Semi-Annual Meeting, Third Tuesday in October

ROCKVILLE 06066

1971 Abbott, Howard, Glenn, 23 Elm
1968 Adamo, Benjamin, 57 Union
1977 Agarwal, Satya N., Rockville General Hospital
1974 Arrieta, Edna Jovita M., Rockville General Hospital
1964 Atkins, Michael Patrick, 57 Union
1971 Brooks, Neil Hurst, 1 Ellington Ave.
1933 Burke, Francis Henry, 45 Park
1977 Conway, Michael Mead, 57 Union
1974 Cook, Robert Stanley, Jr., 23 Elm
1973 DiMeola, Herbert Joseph, 57 Union
1978 Garcia, Fernando Garcia, 31 Union
1971 Haber, Melvin, Rockville General Hospital
1976 Johnson, Douglas Emil, 57 Union
1955 Josephson, Neil David, Rockville General Hospital
1955 Kristan, Joseph John, 57 Union
1970 Kriz, John Joseph, Rockville General Hospital
1950 Kummer, Seymour Isaac, 1 Ellington Ave.
1976 Lahman, Jerome Edward, 57 Union
1952 Purnell, Marjorie Axford, 23 Davis Ave.
1974 Reyes, Claireman Siazon, Rockville General Hospital
1931 Schneider, William, 72 Orchard
1972 Schwartz, Gerald Lee, 57 Union
1966 Sharon, Michael Reinhardt, 23 Elm

SOMERS 06071

1941 Cullen, James Rescott, Hall Hill Rd.
1965 Maier, Robert Fritz, Main
1974 Whelan, John Joseph, 39 Hampden Rd.

STAFFORD SPRINGS 06076

1960 Amanti, Joseph Anthony, 89 East Main
1974 Chirot, Michel, Johnson Memorial Hospital
1964 DeTora, Albert M., 53 East Main
1974 Rodriguez, Josefina C., Star Rt., Box 5, 97 East
1975 Sawyer, C. Evans, Johnson Memorial Hospital
1976 Sindwani, Desh R., Med. Ctr., Chestnut Hill Rd.
1976 Tumminello, Vincent Joseph, Med. Ctr., Rt. 190
1977 Villa, Arturo Del Pilar, Johnson Memorial Hospital
1978 Waldman, William Joseph, 89 East Main

TOLLAND 06084

1969 Hunt, Malcolm L., 59 Crestwood Rd.
1978 Shah, Dinesh S., 60 Carriage Drive

VERNON 06066

1974 Dhandapani, Balasubramaniam, 23 Elm
1975 Haight, Barry W., 351 Merline Rd.
1977 Handler, Mark Steven, 57 Union
1969 Marmer, Ellen Lucille, 351 Merline Rd., P.O. Box 2340
1970 O'Connell, Charles George, Box 2278
1954 Purnell, Oliver James, 1257 Hartford Turnpike
1969 Shapiro, Harold O., 351 Merline Rd., P.O. Box 2340

OUT OF COUNTY

1958 Dambeck, Allyn Benard, 506 Walking Stick Trail, Clinton, North Carolina 28328

1976 Ghazi-Saidi, Reza, Fox Hill Lane #62, Enfield 06082
1978 Goodwin, Robert Clare, 435 Buckland Rd., South Windsor 06074
1957 Magauran, Brendan Gerard, 199 Maple, Enfield 06082
1975 Silverbach, Spencer, 177 Elm, Enfield 06082
1955 Sonnen, Victor Gerald, 59 Broad Brook Rd., Enfield 06082
1974 Taylor, Thomas Joseph, 2 White Oak Rd., Woodbury 06798
1949 Thayer, R. Bruce, Jr., 221 Whitney Ave., New Haven 06509
1974 Warpinski, Marion A., Rt. 198, Woodstock Valley 06282
1977 Whitman, Morris Benjamin, 115 Hunting Lodge Rd., Storrs 06268

Windham County Association

President: Donald B. Glugover 70 Mansfield Ave., Willimantic 06226
Vice-President: Austin F. Hogan, 320 Pomfret, Putnam 06260
Secretary-Treasurer: Albert T. Lojko, 255 Pomfret, Putnam 06260
Councilor: William A. Whalen, 150 Mansfield Ave., Willimantic 06226
Associate Councilor: William M. Shepard, 168 Main, Putnam 06260

Annual Meeting, Third Thursday in March
Semi-Annual Meeting, Third Thursday in October

ABINGTON 06230

1948 Valentine, Bruce, Eliza F. Clark Memorial Center

ASHFORD 06278

1972 Wintrob, Ronald Marvin, Devwin Hall, R R 1, Box 96

CANTERBURY 06331

1976 Galasyn, Valentine David, Buck Hill Rd.

DANIELSON 06239

1935 Chartier, Gerard Marcel, R R 2 Shawnee Dr.
1968 Harton, Maurice R., 81 Broad
1977 Israel, Daniel, 1 Carter
1949 Jones, James Franklyn, 39 Broad
1973 Khoury, Alexis E., 11 Spring
1974 Middleton, Charles J., 45 Broad
1962 Raheb, Edmond B., 14 Carter
1957 Robinson, Lavius Arad, Jr., 9 Hutchins
1949 Weigel, Stanley Joseph, 53½ Broad

EAST WOODSTOCK 06244

1965 Klare, Rudolph Emil, Route 169

HAMPTON 06247

1974 Larkin, John Thomas, Sand Hill Rd.
1959 Sornberger, Charles Franklin, R.F.D.
1974 Woodworth, John A., North Bigelow Rd.

MOOSUP 06354

1948 Barry, E. Arthur, Jr., P.O. Box 667

NORTH GROSVENORDALE 06255

1976 Chen, Fusen Houston, Thompson Med. Ctr.
1970 Dufort, Robert Thomas, Thompson Med. Ctr., R.D. No. 1
1963 Park, Sowhey, R.R. No. 1

POMFRET 06258

1953 Eaton, Harry E., P.O. Box 238

PUTNAM 06260

1976 Ahola, Saul Joseph, 158 Pomfret
1942 Bates, David Hinrichs, Hotel Putnam
1969 Bouthillier, Joseph E., R.D. 2, Pomfret Rd.
1963 Canty, William Patrick, 320 Pomfret
1974 Chung, Eui Kyun, R.F.D. #1, Pomfret Rd.
1975 Curran, Edward Allan, 320 Pomfret
1970 Diaz, Arturo, Day Kimball Hospital
1963 Goyette, Romain Philip, 330 Pomfret
1974 Heweston, John Buchan, Day Kimball Hospital
1971 Hochberg, David Thomas, 320 Pomfret
1973 Hogan, Austin Francis, 320 Pomfret
1975 Lojko, Albert Thomas, 255 Pomfret
1941 Margolick, Moses, 23 Providence
1976 McLanahan, Sandra Martin, 245 School
1959 Meyer, John Louis, Day Kimball Hospital
1969 Painter, Robert Lowell, 330 Pomfret
1975 Paulhus, John Joseph, Day Kimball Hospital
1930 Prosser, Florence Dean, P.O. Box 642
1934 Shepard, William Mac, 168 Main
1978 Snyder, Richard Philip, 263 Pomfret

THOMPSON 06277

1978 Creme, Joseph John, Chase Rd.
1952 Waldron, Sherman Lester, R.R. 1, Box 2

WILLIMANTIC 06226

1967 Amdur, Millard Jason, Beech Mountain Rd., R.F.D. No. 3
1935 Arnold, Morton, 132 Mansfield Ave.
1950 Beardsley, Frederick Armour, 14 Quarry
1966 Becker, George Edward, 150 Mansfield Ave.
1976 Berry, Guy Neill, Box 116
1962 Bird, Frank Luther, 132 Mansfield Ave.
1956 Bolt, Ernest Albert, Jr., 132 Mansfield Ave.
1970 Bopp, Raymond Karl, 150 Mansfield Ave.
1972 Browne, Edward Randolph, Windham Community Memorial Hospital
1969 Calise, Peter Joseph, Windham Community Memorial Hospital
1978 Collins, Edward J., Jr., 150 Mansfield Ave.
1964 Dodd, Anne H., 86 Puddin La., R.D. #3
1961 Dodd, Samuel Garland, Windham Community Memorial Hospital
1966 Doyle, Fred Wendell, Windham Community Memorial Hospital
1976 Duers, John Allen, 196 Conantville Rd.
1974 Ehrlich, Marvin Cye, 70 Mansfield Ave.
1972 Ellzey, William Joseph, 14 Quarry
1973 Flynn, J. Dennis, R.R. 3, 61 Beech Mt. Rd.
1975 Friedman, Robert M., 196 Conantville Rd.
1969 Gibson, Luther White, 132 Mansfield Ave.
1968 Gillcash, Robert S., 36 Watson at Memorial Park
1965 Glasser, Morton, 99 Mansfield Ave.
1968 Glugover, Donald Benjamin, 70 Mansfield Ave.
1947 Grillo, William, 393 Prospect
1973 Griswold, Douglas Marsh, 150 Mansfield Ave.
1974 Hale, Stanton D., 150 Mansfield Ave.
1977 Hayes, John Raymond, 132 Mansfield Ave.
1958 Herbert, Earle Avery, Windham Community Memorial Hospital
1970 Lawrence, Gerard James, 150 Mansfield Ave.
1975 Lindquist, Carl Warren, 47 Tingley
1940 Little, Mervyn Henry, 196 Conantville Rd., R.F.D. #3
1940 Little, Olga A. G., 196 Conantville Rd., R.F.D. #3
1948 Major, James W., 150 Mansfield Ave.
1978 Masters, Samuel Saunders, 132 Mansfield Ave.
1975 Melton, Alan R., 74 Sawmill Brook La.
1973 Moskowitz, Robert Irwin, 70 Mansfield Ave.
1964 Nepomuceno, Maria Nelly, 132 Mansfield Ave.
1971 O'Brien, Gerald John, Windham Community Memorial Hospital

977 Okstein, Charles Jay, 6 Storrs Rd.
975 Onglingswan, William Tiu, 43 Tingley
967 Peterson, Carl Gregory, Jr., 150 Mansfield Ave.
956 Rosenberg, Murray Zale, Windham Community Memorial Hospital
958 Sandler, Gerald, 132 Mansfield Ave.
963 Sandler, Melvin James, 132 Mansfield Ave.
958 Sikand, Sage Datt, 70 Mansfield Ave.
929 Spector, Nathan, 59 Church
935 Vernon, Sidney, 185 Birch
959 Whalen, William Anthony, Jr., 150 Mansfield Ave.

OUT OF COUNTY

939 Basden, Edwin Herbert, Rt. 87, Columbia 06237
973 Blaney, Lamson, Box 154, Mansfield Center 06250
954 Bowen, Robert Philip, High, Coventry 06238
942 Freeman, John Jay, 18 Hillside Circle Storrs 06268
932 Gilman, Ralph Lawrence, Dog Lane, Storrs 06268
971 Haney, John F. B., 667 Chaffeeville Rd., Storrs 06268
978 Karmarkar, Devdass Dattatraya, c/o Postmaster, Winslow, Arizona 86047
953 Kennedy, George Lloyd, 5 Maple, Jewett City 06351
975 Kirkpatrick, J. Raoul, 400 Washington, Hartford 06106
952 LeRoy, John Baptiste, A.I.M. Med. Ctr. Rt.6, Wellfleet, Mass. 02667
970 Loeser, Lucille Kelley, Farmstead Rd., Storrs 06268
947 Maurer, William Spooner, R.F.D. Oak Ridge Rd., West Lebanon, New Hampshire 03784
1967 McGowan, Thorburn S., University of Connecticut, Storrs 06268
1978 Moriarty, Richard Alden 97 Mansfield Hollow Rd., Mansfield Center 06250
1973 Oxley, Leo L., Box 36, Storrs 06268
1921 Phillips, Karl Tristram, 1174 E. Main, El Cajon, California 92021
1964 Prescott, Blake Daniels, Storrs Rd., Storrs 06268
1937 Rothblatt, Reuben, 1501 N.W. 90th Way, Plantation, Florida 33322
1970 Rucker, Lucille Gertrude, 32 Fern Rd., Storrs, 06268
1953 Tobi, Louise Gertrude, Hardy Rd., R.R. 6, Loudon, New Hampshire 03301
1970 Wandersee, Edward Paul, Star Route, Mansfield Depot 06251

Associate Members

1941 Burr, Harold Saxton, Town Woods Rd., Old Lyme
1947 Darling, George Bapst, 11 Burns, New Haven 06511
1942 Hamilton, James A., University of Minnesota, Minneapolis, Minn.
1941 Hiscock, Ira Vaughn, The Pine Run Community, 6 Viburium Ct., Doylestown, Pennsylvania 18901
1941 Mickle, Friend Lee, 9 Old Pepperidge Lane, Whethersfield 06109
1953 Richardson, William Alan, 99 East Hunting Ridge Rd., Stamford
1954 Sibley, Hiram, 79 West Monroe, Chicago, Illinois 60603

*Denotes American Medical Association Membership

ALPHABETICAL ROLL OF MEMBERS

With medical school and year of graduation

Aaron, S. D., Virginia '64, Westport
Aaronson, R. M., Tufts '67, New Haven
Abad, A. A., Hungarian P. Pazmany '45, Middletown
*Abbot, F. K., Virginia '46, Middletown (Hartford County)
Abbott, H. G., St. Un. N. Y. '52, Rockville
*Abbott, J. L., Albany '62, Torrington
Abeles, J.H., Univ. Birminghan, England, '70, Westport
Abraham, R. I., Albert Einstein '70, Canton
Abrahamian, H. A., Salonica '49, Waterbury
*Abrahams, I. W., N. Y. U. '57, Meriden
Abrahams, M., Tufts '31, New Canaan
Abrahamson, R. H., McGill '30, Stamford
*Abrams, H., State Univ. New York '57, Fairfield
*Abrams, R. M., St. Louis Un. '43, Waterbury
Abreu, G. B. Santo Domingo, '62, New Preston
Acqua, L. C., Yale '41, East Hartford
Adamo, B., Seton Hall '62, Rockville
*Adams, A. J., Indiana '38, Torrington
*Adams, E. C., Cornell '34, Guilford
Adams, G. R., Jefferson '60, New London
Adams, H. A., Trinity Coll. Dublin '47, Cromwell
Adams, M. Johns Hopkins '29, Bath, Maine (Fairfield County)
Adams, R. J., Ohio State '60, Middletown
Adefuin, Z. A., St. Tomas '65, Bridgeport
Adler, D. H., N. Y. U. '43, Westport
*Adzima, J. M., Maryland '27, Trumbull
Agarwal, C. K., King George's Med. Coll. '53, Rocky Hill
Agarwal, S.N., King George's Med. Coll. '63, Rockville
*Agee, F. B., Jr., George Washington '42, Wethersfield
Ahamed, S. Un. Madras '66, Norwich
Ahmed, E. H. S., Alexandria '52, Norwalk
*Ahn, W. B., Yonsei Un. Med. '63, Manchester
Ahola, S. J., Cornell '69, Putnam
*Ahrens, L. B., Vermont '51, New Britain
Aiello, L. J., Boston '35, Norwalk
Akus, J.J. Tufts '74, Jewett City
*Albamonti, M. J., Tufts '38, Norwich
*Albanese, A. N., Siena, Italy '53, Danbury
*Albert, J. S., N. Y. U. '68, Weston
Albert, M., Tufts '57, Meriden
Albis, F. J., Marquette '46, East Haven
Albis, M. D., Marquette '48, East Haven
*Albom, J. J., Columbia '39, New Haven
*Albright, J. A., Illinois '54, New Haven
*Alden, J. O., Tufts '47, Hartford
Alder, W. C., Vanderbilt '70, Hartford
*Alderman, D. B., Long Island '46, New Haven
Alderman, M. Y., Chicago '49, Bloomfield
Aleali, S.H., Tehran Univ. Med Sch. '64, Easton
Alexander, G. S., N. Y. Univ. Sch. of Med., '66, Greenwich
Alexander, J. M., Seton Hall '63, Bridgeport
Alexander, M. M., N. Y. U. '64, Greenwich
*Alfonsi, A. A., Albany '50, Southington
Alhanna Y., Univ. Damascus '72, Hartford
Ali, A. A., King Edward Med. '64, Stamford
*Ali, S. M. Y., King Edward Med. '64, Bridgeport
Alisberg, N., N. Y. U. '44, Bristol
*Allam, A. F., Einshams Un. '58, Bristol
*Allan, T. R., Un. Maryland '71, Hartford
*Allard, G. G., Laval '50, Darien
*Allen, B. I., Washington '32, Norwalk
Allen, E. W., Un. Pennsylvania '57, Guilford
*Allen, J. C., Hahnemann '39, Hartford
*Allen, J. E., Syracuse '30, Norwich
Allen, M. M., Woman's Medical '35, West Hartford
Allen, R., Temple '43, West Hartford
Allen, W.E., Univ. Tennessee '67, New Haven
*Allmendinger, P. D., Michigan '64, Hartford
*Allport, V. G., Queen's Un. '46, Hartford
Alonso, L., Valencia Spain '69, Meriden
Alonso, I., Valencia Spain '69, Meriden
*Alpert, A. E. Creighton '49, New Haven
*Alpert, M., Yale '28, Bridgeport
Altenberg, H. E., N. Y. U. '47, West Hartford
*Alter, B. N., George Washington '61, Hartford
Altshul, V. A. Yale '60, New Haven
Amanti, J. A., N. Y. U. '49, Stafford Springs
*Amarant, L., Vienna '32, Bridgeport
Amato, J. A., Georgetown '56, West Hartford
*Amato, P. R., Tufts '61, Hartford
*Amatruda, F. G., Yale '23, New Haven
*Amatruda, T. T., Jr., Yale '51, Waterbury
Ambrose, P., Temple '42, Bridgeport
Amdur, M. J., Yale '64, Willimantic
*Ameen, L., Virginia '46, New Haven
*Ames, W. G., Columbia '38, Essex
*Amore, F. R., Bologna '57, New Haven
*Amos, I. L., McGill '26, Tarpon Springs, Florida (Fairfield County)
Anastasi, A. F., Rome '65, Hartford
Anderson, A. S., Catholic Univ., Belgium '57, West Hartford
Anderson, C. W., Harford '34, Old Greenwich
*Anderson, D. R., Tufts '56, Waterbury
*Anderson, F. A., Boston '40, Norwich
Anderson, F. P., Yale '62, New Haven
*Anderson, G. W., Jefferson '46, Hartford
*Anderson, H. B., Indiana '41, Bridgeport
Anderson, H. C., Minnesota '43, Palo Alto, California (New Haven County)
*Anderson, R. M., Boston '40, Norwich
*Anderson, T. E., George Washington Un. '64, Torrington
Andrews, A. E., Beirut '45, Hartford
*Andrews, J. F., Jr., Yale '68, Norwalk
Andrews, R. C., Boston '50, Norwich
Andrews, W. B., Columbia '67, Noank
*Andrulonis, P. A., Jefferson '72, Hartford
*Andrus, O. B., Univ. & Bellevue '32, Milford
*Andrus, W. B., Tufts '61, Portland
Angiolicchio, R. Sydney Univ. '63, Hartford
*Angoff, R., Un. Cincinnati '73, New Haven
Annunziata, V., Long Island Coll. Hosp. '30, Newtown
*Antell, M. J., Vermont '29, Southport
Anthony, J. R., Tufts '60, Waterbury
Anton, M. C., Marquette '39, Newburgh, New York (Fairfield County)
Appleby, R. E., Johns Hopkins '49, Wilton
Apter, H., George Washington '34, Hartford
*Apuzzo, A. A., Tufts '36, Fairfield
*Arafeh, M. K., Syrian '55, Middletown
Arbulu, A. A., Un. Trujillo, Peru '69, Enfield
*Arcano, J. T., Temple '52, Southington
*Archambault, H. A., Tufts '27, Norwich
Archer, G. W., Un. Texas '69, Harwinton (New Haven County)
*Arena, A. J., Albany '60, Middletown
Argall, T. R., P & S '61, Bristol
Ariyan, S., N. Y. Med. Coll. '66, New Haven
*Armbruster, L. D., Women's Med. Coll. '47, Cheshi
Armm, M. F., New Jersey Coll. Med. '65, Bridgepo
Armstrong, W.L., Univ. Oxford, England '60, Farmington
Arnault, D. G., Harvard '43, Middletown
*Arnold, M., Harvard '29, Willimantic
*Arnold, P. B., Tufts '67, Danbury
*Arnold, W. P., Jr., Columbia '46, Middlebury
Arnstein, R. L., Harvard '51, Hamden
Aromin, S. C., Santo Tomas '55, Moosup (New London County)
Arons, M. R., Maryland '30, West Harford
*Arons, M. S., Maryland '57, New Haven
*Aronson, A. L., N. Y. U. '58, Hartford

Arrieta, E. J. M., Santo Tomas '67, Rockville
Arturi, P. A., N. Y. U. '52, Greenwich
Aseltine, D. T., Jr., Vermont '51, Hartford
Asis, J., Cordoba Univ. Argentina '62, New Haven
Asken, S., Geneva '58, Stratford
Atkins, M. P., Univ, Coll. Cork, Ireland '57, Rockville
Atlas, E., Albert Einstein '61, Norwalk
Atocha, J., San Marcos, Peru '59, New Haven
Atoynatan, T. H., Istanbul '44, Manchester (New Haven County)
Atwood, A. S., Yale '45, New London
Audet, C. H., Jr., Maryland '46, Waterbury
Audet, R. J., Maryland '46, Waterbury
Auerbach, N., Basel '61, Norwalk
Auerbach, S. R., Tufts '63, Bridgeport
Austin, G. L., Pennsylvania '45, Unionville
Austrian, H., Zurich '55, Trumbull
Aversa, J. M., S. U. N. Y. '67, New Haven
Axline, J.W., Ohio Univ. '56, Bridgeport
Ayotte, L. A., Laval '55, Bristol
Ayoub, J.E., Cairo Univ. '55, North Haven
Ayres, P. B., Toronto '32, Cos Cob
Azar, M. A., St. Joseph '34, Danbury
Babcock, A. L., Jefferson '52, Hartford
Babenco, G. O., Un. Buenos Aires '58, Hartford
Bachman, J. P., Buffalo '26, LaJolla, California (Hartford County)
Bachner, P., Columbia '63, Greenwich
Backhus, L. C., Syracuse '33, Waterbury
Badan, B., Graz '58, Danbury
Badner, D. H., N. Y. U. '41, Meriden
Bader, L. M., S. U. N. Y. '67, Bridgeport
Bae, J. G., Seoul Natl'l. Un. '65, Bristol
Bagdasarian, A. D., Stanford '62, Bristol
Baggish, M. S., Louisville '61, Hartford
Bagnall, J. S., Sheffield Un. '55, Hartford
Bagnall, R. S., Harvard '43, Bloomfield
Bailey, R. H., Vermont '55, Hartford
Baird, R. D., Washington '33, New Milford
Baird, W. H., Tufts '52, Milford
Baker, E. L., Yale '61, Derby
Baker, G. L., Washington '52, Hartford
Baker, S. M., Yale '64, New Haven
Balakrishna, H., Govt. Med. College '63, New Britain
Balakrishna, S., Med. Coll. Mysore, India '61, Glastonbury
Balazs, D.A., Univ. Budapest '40, Windsor Locks
Balazs, D. V., Albert Einstein '72, West Hartford
Baldovi, V. C., Jr., St. Thomas '65, Waterbury
Baldwin, D. B., Temple '67, Essex
Baldwin, W. H., N. Y. Med. Coll. '41, Manchester
Balfour, J. D., Western Ontario '25, Norwich
Balletto, V., Tufts '33, East Haven
Balmaseda, R. Y., Havana '46, Danbury
Baltazar, A. E., Univ. East Philippines '64, Bristol
Baltrucki, H. C., Vermont '52, Hartford
Banfield, R. S., Jr., Columbia '51, Stamford
Bannon, F. M., Vermont '28, Stamford
Banyard, R. D., Columbia '67, Greenwich
Baptist, V., Boston Un. '42, Bristol
Barald, F. C., Boston '36, Hartford
Baratz, M. A., Rochester '50, New Haven
Barber, R. R., Vermont '30, Tucson, Arizona (Fairfield County)
Barbieri, J.J., N.Y.U. '69, Norwalk
Barbour, C. M., Jr., McGill '38, West Hartford
Barbour, P. H., Jr., Yale '41, Farmington
Bardenheier, J. A., St. Louis '63, Essex
Barese, A. M., Naples '35, Danbury
Barile, A. W., Loyola '43, New Haven
Barker, D. C., Maryland '40, Fairfield
Barker, N. J., Toronto '26, West Hartford
Barnett, R. N., Yale '38, Westport
Barney, W. E., Yale '35, Milford

Baron, B. R., Chicago Med. '62, Stamford
°Baron, M. A., Albert Einstein '61, Milford
Barr, G.R., Upstate. Med. Ctr. '68, New Britain
°Barrera, A. M., Aurora Univ '41, Niantic
°Barrero, E. F., Santiago '53, Bridgeport
Barreto, A. R., Un. Asuncion, Paraguay '67, Hartford
°Barrett, F. C., Vermont '46, Norwich
Barrett, J. J., Boston Un. '66, Torrington
Barri, A. R., Vermont '70, Groton
Barroeta, G. R., Central Un. Caracas '63, Meriden
°Barry, E. A., Jr., Laval '46, Moosup
Barry, J. C., Boston '33, Manchester
Barry, R. M., Pennsylvania '54, Mystic
°Barry, R. T., Columbia '46, West Hyannisport, Massachusetts (Hartford County)
°Barse, R. J., Creighton '64, New Haven
°Barstow, R. I., Jefferson '33, Norfolk
Barter, J.P., Univ. College Cork '69, Naugatuck
°Barton, D. C., Rochester '52, Portland
°Barton, J., N. Y. U. '58, Norwalk
°Bartus, S. A., St. Louis '58, Hartford
Barwick, P. E., McGill '62, Granby
°Barysh, N., Rush '33, Danbury
Basden, E. H., Tufts '33, Columbia (Windham County)
°Basile, J. X. R., Vermont '53, Hartford
Baskin, A. H., Minnesota '32, Westbrook (Hartford County)
°Baskin, A. M., Albany '52, New Haven
Bason, R. H., Seton Hall '61, Simsbury
Bass, D. M., Tufts '67, Hartford
Bassford, W. W., Tufts '54, Watertown
°Basu, S. K., Calcutta '60, Hartford
Batelli, C. F., Yale '28, New Haven
Bates, D. H., Long Island '39, Putnam
Batiancila, V.V., Cebu Institute of Med. '70, Milford
°Batt, H. D., Hahnemann '50, New Haven
Battista, A. W., Tufts '24, New Haven
°Baue, A. E., Harvard '54, New Haven
Bauer, W. F., Jr., N. Y. Med. Coll. '50, Killingworth
Baughn, S. P., Baylor '73, New Haven
°Baum, S. J., Vermont '48, Fairfield
°Bausch, C. P., Tufts '29, Nantucket, Massachusetts (Hartford County)
Bauta, H. P., Univ. Havana '60, Newtown
Bavor, C. W., Northwestern Univ. '74, Guilford
Baxter, M. F., Tufts '53, Glastonbury
°Bayer, A. E., Vermont '48, New Britain
Bayless, A. E., Southern California '45, Milford
°Beakey, J. F., Tufts '43, Hartford
°Bean, K. F., Tufts '60, Bristol
°Beardsley, F. A., Cornell '43, Willimantic
Bearman, J.L., Un. Geneva, Switzerland '65, New Haven
Beasley, A. S., N. Y. U. '47, Westport
°Beatman, B., Albany '52, New London
°Beatrice, A. A., Tufts '29, Bristol
Beatrice, M. A., Columbia '56, New Haven
°Beaty, J. T., Columbia '43, Greenwich
°Beauchamp, L. A., Vermont '44, Waterbury
Beaudoin, J. R., Creighton '68, Danbury
°Beck, D., Albany '54, Westport
°Beck, E. C., Yale '26, New York City (Fairfield County)
°Beck, E. M., Yale '48, Greenwich
°Beck, J. E., Virginia '39, West Haven
°Beck, R. S., Temple '50, Hartford
°Beck, S. H., Rochester '34, Bridgeport
Becker, A. H., Vermont '43, Bristol
°Becker, G. E., Yale '55, Willimantic
Becker, I. W., Vermont '52, Bristol
°Beckett, R. S., Yale '40, Hartford
°Bedrick, M., Harvard '43, New London
°Bee, R. W., Jefferson '60, New Britain
°Beebe, J.T., Columbia '38, Hartford
°Beeble, J., Albany '48, Waterbury
°Behringer, F. R., Basel '52, Waterford

*Beinfield, M. S., Long Island '45, Westport
Bekeny, D. P., Case Western Reserve Un. '72, Hamden
*Belkin, J. W., Maryland '49, New Britain
*Bellach, H., Long Island '33, New Britain
Belleza, N. A., Univ. Philippines '63, New Haven
*Bellis, J. M., Jr., Harvard '51, Hamden
Bellizzi, J. J., Tufts '47, Hartford
*Bellobuono, J. R., Liege '59, Sierra-Vista, Arizona (Middlesex County)
*Bellucci, A. L., Vermont '54, South Glastonbury
*Bellwin, A., N. Y. U. '45, Stamford
Belman, D.A.J., McGill '66, New Britain
*Benavides, C. G., Pennsylvania '60, Manchester
Bender, L., Hahnemann '39, Salem
*Bender, M., Med. Coll. Virginia '59, New Haven
*Bender, S. H., Chicago '61, Westport
*Bendett, R. J., Tufts '55, Hartford
*Benjamin, B. I., Columbia '61, Stamford
Benjamin, J. L., N. Y. U. '67, Stamford
Benjamin, M. R., N. Y. Med. Coll. '50, Stamford
Benkovich, G. O., Budapest '30, Rocky Hill
*Benninghoff, D. W., Columbia '53, Greenwich
Benoit, K.G., Columbia P & S '70, Bristol
*Benoit, R. J., Georgetown '26, Clearwater, Florida (Hartford County)
Bensch, K. G., Erlangen '53, Stanford, California (New Haven County)
Benson, J.B., Tufts '72, Hartford
Benton, A. J., State Univ., N. Y. '57, New Canaan
Benton, P. E., Columbia '34, Orleans, Massachusetts (New Haven County)
Benton, R. P., McGill '56, New London
Berenbaum, P.L., Med. Coll. Virginia '72, Philadelphia, Pennsylvania (New Haven County)
*Beres, M., Komensky Univ. '59, Bridgeport
Beres, P., Columbia '52, Westport
Berg, G.R., Univ. Rochester '67, Waterbury
Bergendahl, G. T., Tufts '61, Norwich
*Bergendahl, H. A., Tufts '33, Norwich
*Berger, D. S., S. U. N. Y. '63, Danbury
*Berger, J., Univ. Florida '63, East Hartford
*Berger, R. O., Un. Louisville '69, Winsted
*Berkley, R. B., Un. Penna. '66, West Hartford
Berkun, S. G., Lausanne '63, Bridgeport
Berland, R. H., Minnesota '61, Hartford
*Berlin, B. B., McGill, '56, Hartford
Berlowe, M. L., State Univ. N. Y. '23, New Haven
Berman, A. M., Boston Un. '74, Chester
Berman, L. H., Edinburgh '49, Westport
Berman, M.R., N.Y. Medical College '70, Hamden
Berman, S., Long Island '43, New Haven
*Bernacki, E. J., New Jersey Coll. Med. '67, Hartford (Litchfield County)
*Bernanke, M., St. Louis '27, Southbury
*Bernard, M. T., N. Y. Med. Coll. '44, Norwalk
*Berneike, R. R., Western Reserve '41, New Haven
Bernene, J. L., Albany '67, Greenwich
*Bernstein, A., N. Y. U. '53, New Britain
Bernstein, A. E., N. Y. U. '58, Middletown
*Bernstein, C. M., N. Y. Med. Coll. '54, New Britain
Bernstein, D. J., Vermont '33, New Britain
Bernstein, J., Georgetown '51, Bridgeport
*Bernstein, L., Berne '36, Bloomfield
Bernstein, M.I., Phila Coll. Osteopathic Med. '43, Bridgeport
*Berry, G. N., George Washington Un. '45, Willimantic
Berry, R. W., Columbia '50, Bridgeport
Bersier, A. M., Berne '41, Bridgeport
Bertuch, A. W., Maryland '60, Middletown
*Berwick, P., N. Y. U. '38, Moodus
*Bessa, O., Jr., Parana-Brazil '56, Stamford
*Besser, E. L., Johns Hopkins '37, Manchester
Betten, M. G., Albert Einstein '66, Norwich
Beup, L. P., Univ. Santo Tomas '68, Terryville
Biassey, E. L., Howard '47, Stratford
Biehn, D. M. F., Queen's '37, Fairfield
Biehn, S. L., Toronto '26, Bridgeport
*Bielecki, C. E., Tufts '39, Norwich
Billings, W. C., Columbia '50, New Haven
*Bingham, D. B., Colunbia '66, Salem
Binnie, H. S. P., Edinburgh, Scotland '52, Bethel
Biondi, B., Tufts '38, New Haven
*Biondi, R. M., Creighton '64, Norwalk
*Biondino, C. R., New Jersey Coll. Med. '69, Meriden
*Birchall, E. F., Vermont '47, Watertown, New York (New London County)
*Bird, F. L., Cornell '48, Willimantic
Bird, F. S., Vermont '33, Bristol
Bird, K. I., Jr., Temple Un. '68, Durham
Birge, E. B., N. Y. Med. Coll. '57, Stratford
*Birge, H. L., Pennsylvania '33, East Hartland
*Birnbaum, H. B., Royal Coll. England '35, Madison
Birney, T. P., Northwestern '39, Bridgeport
*Bisceglia, J. G., Georgetown '48, Greenwich
*Bishop, C. C., Yale '30, Wardsboro, Vermont (New Haven County)
*Bisson, B. P., Vermont '53, Waterbury
*Bizzozero, O. J., Vermont '27, Waterbury
*Bizzozero, O. J., Jr., St. Univ. New York '62, Waterbury
Blabey, R. G., Jr., Columbia '67, Stamford
Blake, A.F., Rutgers Med. Sch. '75, Higganum
Blakeslee, Sister M. H., Ottawa '67, West Hartford
Blanchard, B. M., Temple '54, Hartford
*Blanchard, D. L., Yale '31, Branford
Blaney, C. C., Boston '40, Bridgeport
*Blaney, L., Cornell '40, Mansfield Center
*Blank, G. I., Bern '59, New Britain
*Blank, M. B., Aberdeen '50, Bridgeport
Blank, S., Virginia '41, Waterbury
*Blank, V. E., Free Univ. Brussels '54, Bridgeport
*Blansfield, H. N., Yale '47, Danbury
Blanton, J.W., Jr., Yale Univ. '70, New Haven
*Blass, J. W., Univ. Vienna '27, Stamford
Blau, J. S., Upstate Med. Ctr. '68, New Britain
Blechner, J. N., Yale '57, Farmington
Blinkoff, J. J., Un. Bern, Switzerland '37, Torrington
Blodinger, I. E. Yale '25, Boca Raton, Florida (New Haven County)
*Blogoslawski, W. J., Georgetown '27, New Britain
Blomquist, W. S., Tufts '69, Granby
*Bloom, D. I., Tufts '35, Thompsonville
*Bloom, G. P., Cornell '69, Hartford
*Blossom, D. B., Columbia '38, Greenwich
*Blum, L. M., Duke '55, Fairfield
Blum, R. S., Wayne State '70, Milford
Blumberg, J. M., N. Y. U. '66, Old Greenwich
Blumenfeld, R.I., State Univ. N.Y. '72, Bridgeport
Blumer, A. T., St. Un. N. Y. '66, Southington
Boas, N. F., Harvard '45, Mystic (Fairfield County)
*Bobowick, A. R., Tufts '66, Waterbury
Bobrow, A., Berne '39, Hartford
Bobrow, S. M., Downstate Med. Ctr. '68, New Haven
Bobruff, J., Yale '55, New London
*Bockar, J. A., Hahnemann '69, Stamford
Boelhouwer, C., Leiden '57, Hartford
*Bogdan, P. E., N. Y. U. '58, Greenwich
*Bogin, M., Yale '26, Bridgeport
Boissevain, A. R., Jefferson '63, Oxford
*Bolt, E. A., Jr., Johns Hopkins '50, Willimantic
*Boltax, R. S., Boston '63, Derby
Boltax, S. P., Temple '62, New Haven
*Bolton, J. D., Hahnemann '43, Greenwich
Bonaccorsi, B. I., Pisa-Italy '55, Waterbury
Bond, O. B., Dunedin, New Zealand '53, Stamford
*Bonhein, N. A., Chicago '70, Greenwich
*Bonner, G.A., Vermont '45, New Haven
Bonner, R.A.J., Maryland '38, Waterbury

Bonnett, D. N., Illinois '43, Greenwich
Bonney, H. T., Toronto '52, Hartford
Book, D. T., Western Reserve '43, Hartford
Boorer, R. T., St. Thomas '55, Ridgefield
Bopp, R. K., Vanderbilt '56, Willimantic
Borden, W. A., New York Univ. '58, Bloomfield
Boren, C. W., Washington Univ. '60, Hartford
Boreyko, C. J., Univ. Argentina '65, Bridgeport
Borger, A. P., Michigan '53, Old Lyme
Borges, J. S., Cornell '70, Greenwich
Borkowski, H., Harvard '72, Waterbury
Bornemann, C., N. Y. Med. Coll. '40, Falls Village
Bornstein, H. D., Jr., Yale '53, North Haven
Borowski, J., Med. Coll. New Jersey 70, Higanum
Borowy, J. E., Yale '50, Stamford
Borrelli, A. P., St. Univ. New York '60, Newtown
Borsos, L. A., Pazmany '50, Bridgeport
Bottiglieri, N. G., Un. Vermont '45, Stamford
Bousa, W. S., N. Y. U. '48, Bridgeport
Bouthillier, J. E., Georgetown '61, Putnam
Bove, J. R., Maryland '53, New Haven
Bowen, F. D. T., Maryland '42, West Hartford
Bowen, R. P., N. Y. Med. Coll. '52, Coventry
(Windham County)
Bowen, W. R., Syracuse '53, Brookfield
Bower, B. F., Johns Hopkins '58, Hartford
Bower, R. S., Madres '45, New Britain
Bowman, S. H., Hahnemann, Chicago '13, Naples, Florida
(Fairfield County)
Boyd, J. E., Albany '62, Milford
Boyd, R. B., Tufts '41, Wallingford
Braat, J. P., Utrecht '30, Manchester
Braceland, F. J., Jefferson '30, Hartford
Brackett, J. W. Jr., Columbia '58, Waterbury
Bradburn, H. B., Vanderbilt '56, New Haven
Bradford, K. A., Downstate Med. Ctr. '65, New Haven
Bradley, D. F., Jr., N. Y. Med. Coll. '57, Hartford
Bradley, E. G., Cornell '48, Bridgeport
Bradley, E. T., Cornell '36, New Canaan
Bradley, J.Y., Univ. Texas '58, Bloomfield
Bradley, R. E., Jr., N. Y. U. '58, Woodbridge
Bradley, W. R., N. Y. Med. Coll, '49, Hartford
(New Haven County)
Brady, J. J., Tufts '55, Hamden
Branch, J. C., Johns Hopkins '59, New Haven
Brand, E. S., N. Y. U. '43, New Haven
Brand, M.H., Univ. North Carolina '72, New Haven
Brandon, K. F., Toronto '32, Hartford
Brandiss, J., Columbia '26, Miami Beach, Florida
(Hartford County)
Brandt, A. A., Yale '51, Milford
Branom, W. T., Jr., New York Univ '60, Greenwich
Braren, C. H., Albany '62, Wethersfield
Bratu, M., Bucharest-Rumania '51, Derby
Brauer, R. L., Univ. of Maryland '64, New Haven
Braun, R., Vienna '29, Bridgeport
Braun, R. W., Nebraska '65, Stamford
Braverman, I. M., Yale '55, New Haven
Bravo, A. J., Yale '64, Bridgeport
Bray, G. H., Vermont '47, New Britain
Breakell, E. S., Buffalo '47, Stamford
Breck, R. W., Yale '45, Wallingford
Breer, R. D., Harvard '54, Manchester
Brennan, E.J., Columbia Univ. '51, Naugatuck
Brenneman, A. R., Yale '58, Hartford
Brensilver, H. L., Columbia '67, Mystic
Brent, R.L., New York Med. Coll. '57 East Lyme
Brewer, A. E., N. Y. U. '41, Lakeville
Brewer, F., Columbia '20, El Cerrito, California
(Hartford County)
Brewer, S. V. L., Hamburg '59, West Hartford
Brewer, T. F., III, New York '57, Old Saybrook
*Brewster, W. B., Jr., Harvard '42, Hartford
Breyan, N. R., N. Y. Med. Coll. '67, Bridgeport
Brezina, P. S., Yale '40, Bristol
*Bria, W. F., Rome '34 Cos Cob
*Bridburg, R. M., Trinity Coll. Dublin '61, Hartford
*Brier, H. D., N. Y. U. '34, Bridgeport
Briggs, H. C., Yale '57, Winsted
*Briggs, R. S., Yale '61, Torrington
Brigham, J. C., Tulane '57, Hudson, Massachusetts
(New Haven County)
*Brink, A. J., Buffalo '62, New Haven
Britting, J. A., Albany '55, Windsor
*Broadhead, A. J., Westminster Hosp. '62, Hartford
Brochin, M., Harvard '56, New Haven
*Brock, W. H., McGill '45, Old Greenwich
Brockway, D. W., Long Island '43, Woodbridge
Brodey, J. F., Jefferson '66, West Hartford
*Brodoff, M., Geneva '53, West Haven
*Brodoff, S. S., N. Y. U. '46, New Haven
Brogden, J. M., Tufts '55, Guilford
Bronson, W. R., Un. Rochester '58, Hartford
Brook, J. E., N. Y. Univ. '68, Ridgefield
*Brooks, N. H. Hahnemann '68, Rockville
Brooks, P. L., McGill '32, Bridgeport
Brothers, D., N. Y. Med. Coll. '66, Milford
Brovender, A., Brussels '58, Norwalk
Brovender, S., Leyden '59, Westport
Brown, B., Harvard '64, Hartford
Brown, C. R., Cornell '45, New Canaan
Brown, D. A., Long Island '46, Darien
*Brown, D. H., Un. Vermont '54, Middletown
*Brown, D. L., Columbia '55, Hartford
*Brown, D. S., Cornell '45, New Canaan
*Brown, F. F., Jr., Columbia '40, Torrington
*Brown, G. M., Univ. Miami '71, Southington
Brown, H., S. Un. N. Y. '58, New London
Brown, H. J., Maryland '65, Westport
Brown, J.E., Yale '66 Middletown
*Brown, L., Jefferson '61, Hartford
Brown, L. G., Un. California '68, Newtown
Brown, M. M., Columbia '69, Sharon
Brown, M. R. S., Temple '43, Meriden
*Brown, P. N., Hahnemann '43, Meriden
Brown, P. W., Univ. Michigan '50 Bridgeport
*Brown, R. B., Cornell '47, Hartford
*Brown, R. J., Maryland '44, Stratford
Brown, S. A., New York Univ. '66, Hartford
Brown, S. F., Univ. Minnesota '45, Darien
Brown, W. M., Glasgow '42, Groton
*Brown, W. T., P. P. Un. Budapest '32, Derby
*Browne, E. R., Tufts '46, Willimantic
Browne, F. J., Nat'l. Univ. Ireland '58, Stamford
*Browne, H. H., Albany '56, Southington
*Browne, M. A., Cork '50, Stamford
*Browning, L. D., Jr., Harvard '49, Stamford
*Browning, S. P., III, Columbia '54, Norwich
*Brubaker, R. E., Pennsylvania '36, Old Lyme
Brumberger, B.J., Univ. Connecticut '74, Meriden
Brunn, F.M., Jr., Columbia Univ. P & S '70, Winsted
*Bruno. J. J., Hahnemann '35, New Haven
*Bruskin, C. E., Leipzig '32, Hartford
*Buchalter, D. J., Michigan '63, Middletown
Buchman, J. G., N. Y. U. '57, Ridgefield
*Buck, B. J., Harvard '26, Hartford
*Buckley, D. F., Creighton Un. '66, Milford
*Buckley, J. L., Tufts '40, Torrington
*Buckley, M. B., National Univ. Ireland '57, Waterbury
*Buckley, W. E., Boston '33, Middletown
*Buckman, R. F., Long Island '45, Milford
*Bucknam, C. A., Columbia '57, Hartford
*Bucknam, F. G., Harvard '47, Heidelberg, West Germany
(Hartford County)

Bucky, T. L., Yale '43, Weston
*Buebendorf, D. P., Yale '60, Essex
Bueno, D., Univ. Istanbul '50, Waterbury
Bujdud, C. M., Un. Puebla '52, Stamford
Bull, M. B., Columbia '62, Darien
Bull, S. M., Physicians & Surgeons '62, Stamford
*Bullen, H. G., Pennsylvania '41, Stamford
Bullwinkel, G. A., Jr., Columbia '61, Stamford
*Bunce, J. M., Yale '42, Hartford
Bundy, E. S., Vermont '48, Meriden (Hartford County)
*Buol, R. S., Harvard '23, New Britain
Buonomano, R. J., New Jersey Coll. '68, Simsbury
Burack, J. O., Tufts '39, South Norwalk
*Burbank, J., Harvard '43, Meriden
*Burch, P. G., Johns Hopkins '63, Meriden
Burchell, R. C., Buffalo '54, Hartford
*Burd, R. M., Columbia '63, Fairfield
*Burke, A. V., Georgetown '53, East Norwalk
Burke, F. H., Georgetown '31, Rockville
Burke, G. F., Minnesota '54, Middletown (Hartford County)
Burke, W. H., Cornell '45, Bridgeport
Burkle, F. M., Jr., Vermont '65, Hanover, New Hampshire (Middlesex County)
*Burnham, B. A., Tufts '34, Waterbury
Burnham, B. E., Pennsylvania '64, Farmington
Burns, D. W., Georgetown '65, Manchester
Burris, J. O., Rochester '56, Danbury
*Burton, G., New York Univ. '63, New London
Buscemi, A., Georgetown '39, Broodfield
Bush, H. S., Jr., Cornell '57, Rockville (Hartford County)
*Butenas, C., Rochester '53, Meriden
*Butler, A.R., Howard Univ. '66, Hartford
*Butler, R. W., Tufts '30, Cheshire
Butt, M. T., King Edward Medical School '71, Middletown
Butterfield, R. K., Tufts '50, Manchester
*Butterfield, W. L., Jr., Harvard '41, Hartford
Byard, R. M., Women's Med. Coll. Pa. '52, Bridgeport
*Byer, S., George Washington '57, New Britain
*Byrne, D. W., Columbia '27, Windsor Locks
Cacace, V. A., Loyola '39, Bridgeport
Cadelina, W. E., Santo Tomas '62, Derby
*Calabrese, C. T., Johns Hopkins '65, Bridgeport
Calabrese, P. R., Un. Bologna '69, Bridgeport
*Calabresi, M., Florence '26, New Haven
Caldarelli, R. A., Loyola '47, Hartford
*Caldwell, D. M., Jr., McGill '52, Manchester
*Calio, J. V., Stanford '46, Hartford
Calise, P. J., Washington Univ. '55, Willimantic
*Callahan, J. L., Georgetown '45, Newington
*Callan, J. P., Univ. Coll. Dublin '63, Wethersfield
Callan, W. M., UConn. '73, Bloomfield
*Calogero, J. A., N. Y. U. '63, Hartford
*Camarda, A. L., Naples '41, Bridgeport
*Cameron, I. R., Trinity Coll. Dublin '61, Hartford
*Camilleri, J. A., Yale '55, New Haven
*Camp, W. A., Emory '57, Greenwich
*Campbell, C., L. I. College Hosp. '25, Wilton
Campbell, D. I., Queens Un. Ireland '62, Middlebury
*Campbell, I. G. Univ. Durham '58, Manchester
Campbell-Jacobs, R. M., Western Reserve '60, Middletown
*Campbell, M. F., Duke '61, Greenwich
*Campbell, R. H., Wayne '35, West Hartford
*Campbell, S., Vermont '23, Meriden
*Campione, M. P., Lausanne '54, Meriden
Candels, L. R., St. U. N. Y. C. '52, Aron
*Caney, W. H., Albany '41, Watertown
*Canfield, N., Michigan '29, Guilford
*Canniff, J. C., Cornell '43, Torrington
*Cannon, J. L., Yale Univ. '47, Simsbury
*Canter, N. M., N. Y. U. '55, Bridgeport
Canty, W. P., Nat'l. Univ. Ireland '54, Putnam
*Canzonetti, A. J., Chicago '44, Waterbury (Hartford County)
Capobianco, A. P., N. Y. Med. Coll. '40, Bridgeport
*Capobianco, L. F., Loyola Univ. '58, Winsted
*Capodilupo, V. M., Naples '54, Bridgeport
*Cappelletti, A. J., Jefferson '46, Waterbury
*Cappucci, L. W., Georgetown '53, New Haven
*Caragol, W. J., N. J. Coll. of Med. '68, Riverside
Carengelo, E. V., Tufts '31, New Haven
Carangelo, J., Tufts '38, Hartford
Cardone, M. J., Vermont '37, Bridgeport
*Carelli, G. F., Yale '11, New Haven
Carey, T. B., Albany '44, Delray Beach, Florida (Hartford County)
*Carey, W. C., Columbia '33, Meriden
Carino, J. M., N. Y. Med. Coll. '66, Stamford
Carlson, D. A., Yale '58, New Haven
*Carlton, L. S., Harvard '52, Hartford
*Carolan, P. J., Seton Hall '63, Bridgeport
*Carpentieri, J. C., Lausanne '58, Hartford
*Carr, M. F., Univ. Coll. Dublin '54, Cromwell (Hartford County)
*Carrabba, S. R., Jefferson '46, Bloomfield
*Carrol, J. E., Boston '25, West Hartford
Carroll, R. E., Albany '73, Bridgeport
*Carroll, R. Mc., West Virginia '65, Westport
Carter, F. J., N. Y. U. '47, Norwich
*Carter, M. G., Harvard '41, New Haven
Carter, M. K., Georgetown '52, Norwich
*Cartland, J. E., Jr., Columbia '43, Hartford
*Carvey, E. V., Yale '35, Wethersfield
*Cary, J. M., Western Reserve '45, Newington (New Haven County)
Casale, A. J., Hahnemann '60, Hartford
Casazza, A. R., Columbia '62, Danbury
Case, A.L., George Washington Univ. '60, Bloomfield
Casden, R.S., Columbia P & S '75, Branford
Caserta, S. J., Georgetown '37, Bridgeport
*Casey, E. J., Georgetown '58, Bronx, New York (Hartford County)
*Casey, T. R., Univ. of Manitoba '57, Fairfield
Cashman, J. L., Hahnemann '37, North Haven
Cassell, R. T., Geneva '54, Westport
*Cassin, C. M., New York Med. Coll. '59, New Haven
Cassone, R., Vermont '41, Stamford
*Castagno, M. M., Boston '43, Hartford
*Castagno, R. A., Columbia '41, Hartford
Castaldo, L. F., Tufts '37, Fairfield
*Castiglione, F. M., N. Y. Med. Coll. '42, New Haven
Castner, J.J., Georgetown '70, Hartford
Castro, R. A., Buenos Aires '66, Durham (New Haven County)
Castro, R. P. Havana '45, Danbury
Catanuto, N. T., Dalhousie '61, Derby
*Catlin, B., Harvard '66, Greenwich
*Catrini, V. J., N. Y. Med. Coll. '67, Middletown
Cavallaro, P. J., Bologna '51, New Haven
Cavaliere, M. J., Creighton Un. '73, Bridgeport
*Cavaliere, V. J., N. Y. U. '43, Bridgeport
*Cavalieri, R. J., Jefferson '42, Wethersfield
Cavicke, D. C., Tufts '52, New London
*Cavo, J. W., Jr., Virginia '66, New Britain
Cazenave, H., Univ. Buenos Aires '58, New London
*Celentano, L. E. H., Hahnemann '30, New Haven
*Cenci, V. P., Tufts '29, West Hartford
*Cerritelli, D. H., New York Med. '62, Middletown
*Ceulemans, C. P., Ghent '52, Middletown
Chace, C. W., Yale '52, Middletown
*Chachkes, J. T., Chicago '58, New Canaan
Chadda, S. K. B., Andhra Med. Coll. '62, Bridgeport
*Chait, S. A., Nebraska '40, Litchfield
Chamberlin, A. C., Boston Univ. '57, Stamford
*Chambers, C. F., George Washington Un. '61, Ridgefield
Chan, D. W., Kwong Wah Med. Coll. '54, Norwalk
Chandra, B. G., Mysore '66, Milford

Chang, E. C. C., Hong Kong '64, New Haven
Chang, S. C., Seoul '47, Waterbury
Chapnick, G. A., Vanderbilt Un. '64, Norwalk
Charde, J. P., Pennsylvania '67, Sharon
Charen, W.D., St. Louis '74, Hartford
Charendoff, L., Toronto '56, Manchester
Charney, J., Duke Un. '72, New Haven
Chartier, G. M., Boston '33, Danielson
Chasnoff, J. A., Long Island '36, West Haven
Chaucer, N. G., Columbia '41, Hartford
Chavez, A., Univ. Santiago, Spain '64, Waterbury
Chawla, S. K., All India Insti. of Med. Sciences '63, Hartford
Chen, F. H., Tien Tsin Med. Coll. '58, North Grosvenordale
Chen, M. G., Un. Michigan '62, New Haven
Cheney, C. B., Yale '41, New Haven
Cherry, J. B., McGill '43, Danbury
Chess, J., Boston Un. Sch. of Med. '70, Norwalk
Chester, L. L., Vermont '38, Bloomfield
Chetrick, A., Yale '53, New Haven
Cheung, E. H. F., Un. of the East '67, North Branford
Chi, T.N., Taipei Med. Coll. '70, Norwalk
Chiang, H. T. Nat'l. Taiwan Un. '63, Greenwich
Chiapppinelli, D., Tufts '46, Milford
Chiaramonte, C. T., Long Island '26, North Salem, New York (Fairfield County)
Chick, F. B., N. Y. Med. Coll. '46, Easton
Chinniah, A. N., Ceylon '67, Bridgeport
Chiota, J. A., Vermont '37, Bridgeport
Chirot, M., Un. Paris, '39, Stafford Springs
Chmielewski, T.D., S.U.N.Y. '74, Manchester
Chobian, J. A., Loyola '33, Oxford
Choe, J.K., Ewha Woman's Univ. '71, Granby
Choi, C. S., Seoul Nat'l., Un. '58, Farmington
Chotkowski, L. A., Yale '42, Kensington
Chowdhury, M. G., Dacca Med. Coll., Bangladesh '69, Windsor
Choy, O. G., Downstate Med. Sch. '72, Bridgeport
Christie, F. J., N. Y. U. '46, Greenwich
Christoforo, J. M., Georgetown '64, North Haven
Chumnanvech, N. L., Chiengmai Med. Sch. '67, Westport
Chumnanvech, T., Chiengmai Med. Sch. '65, Westport
Chung, E. K., Yonsei '62, Putnam
Ciardiello, K. A., New Jersey '68, New Haven
Ciccarelli, A. W., Hahnemann '42, Bristol
Cihak, H., Charles Un. '62, East Hartford
Cimmino, G. N., Yale '60, Ansonia
Cinti, D. C., Temple '69, Hartford
Cipriano, A. P., Long Island '41, New Haven
Cirmo, W. F., Vermont '59, Wallingford
Citrano, E. C. Louvain '58, Trumbull
Clapp, P., Harvard '52, New Britain
Claps, R. J., New York Med. Coll. '68, Manchester
Clark, B.B., Cornell '37, Guadalajara, Mexico (Hartford County)
Clark, I., Albany '65, Hartford
Clark, J. L., George Washington Un. '71, Greenwich
Clark, M. L., Tufts '65, New Milford
Clark, S., Jr., N. Y. Med. Coll. '57, Middletown
Clarke, C. C., Yale '32, New Haven
Clarke, H. M., Rochester '39, New Britain
Clarke, W. A., Georgetown '46, Hartford
Clarke, W. I., Harvard '41, South Daytona, Florida (New Haven County)
Clason, F. P., Harvard '15, West Hartford
Clayton, E. M., Yale '59, New London
Clayton, J. A., State Univ. N. Y. '54, Cos Cob
Cleaver, R. S., Jr., Cornell '45, Bridgeport
Clement, D. H., Harvard '35, New Haven
Clement, P. A., Un. Cincinnati '58, New Haven
Clift, G. V., Columbia '58, Fairfield
Climo, S., Ohio '29, New Haven
Cloonan, J. J., Georgetown '40, Stamford
*Coassin, N. A., Yale '55, Milford
*Coates, S. P., Maryland '34, Suffield
Cobb, R. J., N. Y. Med. Coll. '57, Hartford
Cocco, T. D., Rome '57, Bridgeport
*Cocilovo, V., Palermo '53, Newington
Cody, T. P., Long Island '36, New Canaan
Coe, M. J., Queen's Univ. '57, Portland
*Coe, R. E., Tufts '51, Hamden
*Coelho, J. N., Lisbon '49, Hartford
*Cogswell, L. P., Harvard '33, Hartford
*Cohart, E. M., Columbia '33, New Haven
*Cohen, B., Albany '42, Newington
Cohen, G. A., S. U. N. Y. '68, Ridgefield
Cohen, G. M., College of Virginia '69, Meriden
Cohen, G. S., Yale '63, Orange
*Cohen, H. G., N. Y. Med. '43, Danbury
Cohen, I., Hebrew Univ. Israel '61, Bloomfield
Cohen, I.M., N.Y. Univ. '71, Waterbury
Cohen, I. S., S. U. N. Y. '67, Fairfield
Cohen, R. B., St. Univ. N. Y. '69, Bloomfield
Cohen, R. H., Un. Pittsburgh '66, Avon
Cohen, S. A., N. Y. U. '66, Stratford
*Cohen, S. L., Buffalo '53, Bridgeport
Cohen, S.R., Univ. Pennsylvania '71, New Haven
Cohen, W., Western Reserve '56, Waterbury
*Cohen, W., Yale '23, New Haven
Cohen, W. B., N. Y. U. '63, Fairfield
Cohn, F. L., Yale '71, Waterbury
Cohn, G. L., Hahnemann '50, Hamden
Cohn, S. H., Boston '34, Hartford
Cohn, W. M., U. Pittsburgh '71, Wilton
Colburn, R. F., Vermont '37, Stamford
Cole, J. W., Washington '44, New Haven
*Cole, M. J., St. Bartholomew's '39, Hartford
*Cole, R. G., Meharry '44, New Haven
Cole, R. M., Cincinnati '57, Greenwich
*Coleman, J. V., Vienna '34, New Haven
*Coleman, M., Long Island '42, Stamford
Coleman, P. J., Georgetown '54, Danbury
*Coletti, L., Vermont '57, Norwich
Coley, G. M., Harvard '53, Hartford
*Collias, J. C., Yale '56, Hartford
*Collins, C. D., Univ. Illinois '65, Plainville
*Collins, E.J., Jr., Un. Vermont '73, Willimantic
*Collins, J. T., Jr., State Univ. of N. Y. '57, Fort Lauderdale, Fla. (New Haven County)
Collins, R. N., Yale '62, Sharon
*Collins, W. F., Yale '47, New Haven
Colliton, R. J., Kansas '62, Vernon (Hartford County)
*Colman, N. D., Tufts '67, Sharon
Colmers, R. A., Vienna '37, Savannah, Georgia (Fairfield County)
*Colom, W. A., Temple Univ. '73, New London
*Colwell, B. S., Yale '48, Hamden
Combs, J. T., Johns Hopkins '59, Wallingford
Comstock, B.E., Penn State '72, Bristol
Conant, R. G., Georgetown '49, Hartford
Conboy, K. E., Creighton Univ. '69, Greenwich
*Concannon, P. R., Nat'l Un. Ireland '64, Meriden (Middlesex County and New Haven County)
*Conklin, C. T., Jr., Vermont '41, Thomaston
Connell, T. H., Jr., Michigan '45, Bridgeport
*Connolly, A. J., Georgetown '28, New Haven
Connolly, J. F., N. Y. Med. Coll. '59, Bridgeport
*Connolly, J. P., Georgetown '36, Stamford
*Connor, G. M., Boston '35, Plantsville
Connors, R.C., Cornell '67, Stamford
Conrad, C. C., Tufts '54, Colchester
*Conroy, J. T., Vermont '55, West Hartford
Conroy, M. M., Cornell '59, Meriden
*Conte, B. L., N. Y. Med. Coll. '50, New Haven
*Conte, H. C., N. Y. U. '54, Branford

°Conte, M. G., Naples ’35, New Haven
°Conway, D. F., Jr., Columbia ’37, Clarks Summit, P.A. (New Haven County)
°Conway, E. J., Yale ’44, Hartford
°Conway, M., St. Bartholomew’s ’43, West Hartford
Conway, M. M., Un. California ’73, Rockville
°Cook, C. B., London Univ. ’51, Stamford
°Cook, D. E., Cincinnati ’55, Old Saybrook
Cook, R. S., Jr., Hahnemann ’68, Rockville
°Cook, T. J., Pennsylvania ’59, Norwich
°Cook, W. H., Western Ontario ’47, Bridgeport
Cooke, R. W., Yale ’43, Hartford
°Coolidge, M. P., George Washington ’62, Fairfield
Coomaraswamy, R. P., N. Y. U. ’59, Greenwich (Litchfield County)
Cooney, G. E., Nebraska ’60, Bridgeport
Cooper, D. W., Pennsylvania ’54, New London
°Cooper, E. B., Temple Univ. ’54, Bridgeport
°Cooper, M., Cornell ’48, Fairfield
°Cooper, P. A., State Univ. N. Y. ’53, Hartford
Cooper, R. A., Rochester ’60, New Haven
Copeck, G., Zurich ’56, Stratford
Copen, D. L., S. U. N. Y. Downstate ’69, Danbury
Coppes, H. R., Amsterdam ’57, Milford
°Coppeto, C. J., Marquette ’39, Waterbury
Coppeto, J. R., Harvard ’70, Waterbury
Coppola, P. J., Georgetown ’69, New Haven
°Coral, M., University of Zurich (Switzerland) ’39, Terryville
Coralli, R.J., Emory Univ. ’74, Torrington
°Corazzelli, F. G., Jr., Bologna ’56, Trumbull (New London County)
°Corcoran, M. A., Tufts ’30, Cromwell (Hartford County)
Corey, J. M., Tufts ’59, Norwalk
Corey, W. Van A., George Washington ’33, Hamden
Coric, V., Univ. Zagreb, Yug. ’58, Norwich
°Corley, E. H., Howard ’49, Bridgeport
°Cornacchia, R., Naples ’51, Naugatuck
°Cornelio, F. J., Georgetown ’34, Winsted
Cornett, S. J., Queens ’55, Cromwell
°Corradino, C. L., Tufts ’29, New Haven
°Corridon, J. D., Georgetown ’28, East Norwalk
°Corsaro, T. P., State Univ. New York ’56, Milford
°Corso, P. F., Tufts ’52, Bridgeport
°Corwin, D. B., Syracuse ’32, Norwalk
Corwin, H. R., Long Island ’42, Norwalk
Coscia, A. G., Cornell ’68, Norwalk
°Cosentino, R. T., Georgetown ’62, New Britain
°Coshak, M., Boston ’37, Waterbury
°Costa, P. J., Yale ’55, Norwich
Costantini, L., Un. Padova, Italy ’71, West Hartford
°Cottiero, T., Yale ’26, Waterbury
°Cottle, R. D., McGill ’60, Stamford
°Couch, F. H., Yale ’30, Cromwell
Coughlin, F. R., Jr., Yale ’52, Stamford
°Coulson, L. A., St. U. N. Y., N. Y. C. ’52, New London
°Cousins, M. L., Vermont ’52, New Haven
Covey, S. S. St. U. N. Y. ’70, New Haven
Covey, W. G., Physicians & Surgeons ’62, Stratford
°Cox, M. E., Cincinnati ’36, Waterbury
Cozzolino, E. N., Harvard ’33, West Haven
°Cramer, S. L., N. Y. Medical ’41, Hartford
Crampton, C. B., Yale ’37, Middletown
°Crane, J. E., Vermont ’39, Stamford
Cranston, R. W., Jr., Albany ’46, Norwich
°Crary, H. I., Columbia ’48, New Canaan
°Craven, R. O., N. Y. Med. Coll. ’62, Newtown
°Crawford, J., Howard ’59, Hartford
Crawford, W. O., Jefferson ’59, Guilford
°Creatura, J. A., Yale ’58, Bridgeport
°Creaturo, N. E., Boston ’31, Trumbull
Creme, J.J., Un. Conn. ’73, Thompson
Crisafi, B. R., Stritch ’63, Greenwich
°Crispin, M. A., Temple ’41, West Palm Beach, Florida (Hartford County)
°Crombie, H.D., Jr., Tufts ’61, Hartford
°Cronan, T. L., Stritch ’56, Trumbull
Cronin, M. T. I., Georgetown ’65, New Haven
Cronin, R. J., N. Y. Medical ’59, Hartford
Cronin, W. T., New York Med. Coll. ’59, Norwalk
°Crootof, R.E., New York Med. Coll. ’70, Norwich
Cross, V. F., Un. Vermont ’53, Sharon
Crossman, W. F., Georgetown ’65, Trumbull
°Crothers, C. H., Yale ’44, New Britain
Crowley, J. W., Catholic Univ. ’54, New Britain
°Crown, C. A., Illinois ’47, New Canaan
°Crowther, D. F. S., N. Y. Med. Coll. ’64, Cromwell
°Cruz, L. R., Nat’l. Univ. Columbia ’66, New Haven
Csemy, A., Budapest Medical Univ. ’64, Broad Brook
°Csovanyos, L., Budapest ’39, East Norwalk
°Cuello, R. A., Santo Domingo Univ. ’53, Bridgeport (New London County)
°Cullen, C. F., Jefferson ’48, Hartford
°Cullen, J. R., Georgetown ’36, Somers
Cullen, M. T., Woman’s Med. Coll. Pennsylvania ’56, West Hartford
°Cullina, J. C., George Washington ’48, Hartford
Cunha, B.A., Penn State ’72, Hartford
°Cunin, B. M., Temple ’62, Hartford
Cunningham, P. R., Yale ’49, Guilford
Cunningham, R. D. M., Yale ’30, Southbury (Fairfield County)
Curi, J. F. J., Yale ’64, Torrington
°Curis, F. T., Georgetown ’56, Hartford
°Curley, W. H., Jr., Cornell ’38, Bridgeport
°Curran, E. A., Albany ’68, Putnam
°Curran, J. J., Georgetown ’61, Hartford
°Curran, T. L., Boston U. ’39, Hartford
°Curtis, B. H., Columbia ’36, Newington
°Curtis, W. B., Columbia ’34, Fort Lauderdale, Florida (New Haven County)
°Cusanelli, G. N., Long Island ’46, New Haven
°Cushman, G. L., Tufts ’43, Woodbury
Cushman, L. A., Harvard ’24, West Hartford
Cusnir, M., Frankfurt ’36, Meriden
°Cutler, H. J., New York Med. Coll. ’59, Waterbury
°Cutler, H. S., St. Louis ’37, Hamden
Cwik, R. A., Tufts ’66, Guilford
Cyrus, R. W., St. U. N. Y. ’65, Westbrook
Czaja, R. J., Tufts ’53, Thompsonville
°Czarsty, J. C., Georgetown ’54, Oakville (New Haven County)
Czuczka, P., Albert Einstein ’70, Westport
°da Costa, J. F., Lisbon ’55, Hartford
°D’Aiuto, M. L., St. Louis ’60, Bridgeport
Dake, P. D., Univ. Lausanne ’62, Hartford
Dalal, B. J., G. S. Med. Coll. ’64, East Norwalk
Dalal, B. J., Sheth G. S. ’59, Bridgeport
°Dalburg, L. A., Jr., N. Y. Medical ’58, New Britain
Dalgin, P. H., Buffalo ’68, Stamford
°Dallas, M., Boston ’22, New Haven
D’Alotto, J. A., State Univ. N. Y. ’63, Hartford
Daly, J. E., Tufts ’44, Waterbury
°D’Amato, R. L., Un Connecticut ’73, Cromwell
°Dambeck, A. B., Vermont ’54, Clinton, North Carolina (Tolland County)
°D’Ambruoso, D. C., Columbia ’36, West Hartford
°Damiani, R. A., Tufts ’33, Wolcott
°D’Amico, M., Yale ’31, North Haven
Danaher, T. H., Yale ’57, Torrington
°D’Andrea, F. H., Yale ’29, Shoreham, Vermont (Fairfield County)
Danehower, R. L., Pennsylvania ’65, Greenwich
°D’Angelo, A. J., Rome ’42, Southington
°D’Angelo, D. A., Georgetown ’55, Waterbury
°D’Angelo, E. J., Rome ’42, Southington
°Daniels, D. S., Virginia ’69, Middlebury
Daniels, E. H. Jr., Howard ’52, Hartford

Daniels, J. C., Rochester '56, Danbury
Danielson, K. S., Harvard '65, Waterbury
°Danigelis, J. A., Vermont '59, East Hartford
Dann, O. T., Yale '62, New Haven
Danoff, S. J., N. Y. U. '55, Stamford
Danyliw J. M., Jefferson '47, East Hartford
Daoud, I. M., Damascus Un. '71, Hartford
D'Apice, J. P., St. Louis Un. '65, Fairfield
°Darrow, J. E., Tufts '28, New Britain
Das, A., Univ. Calcuttà '67, Bloomfield
Daukas, C., Yale '55, East Hartford
°Daukas, N. J., N. Y. U. '47, Middletown
°Dauphinais, R. M., St. Louis '61, Hartford
Dautrich, A. W., Yale '39, Litchfield
°Davenport, J. J., Jr., Georgetown '59, Farmington
°Davey, L. M., Yale '43, New Haven
°David, N. D., Teheran '43, West Hartford
Davidoff, F.F., Columbia P & S '59, Farmington
°Davidson, A. C., New York '62, Derby
°Davie, R. N., Louisiana '44, Waterbury
Davis, C. D., Johns Hopkins '39, Rancho Bernardo, California (New Haven County)
°Davis, J. B., Kansas '33, Columbia, South Carolina (New Haven County)
°Davol, R. T., Columbia '41, Greenwich
Dawe, E. L., London '48, Danbury
°Day, E. J., N. Y. Med. Coll. '54, West Haven
°Dayton, C. J., Temple '47, Cheshire
°Dean, M. A., Tufts '43, Bridgeport
°Dean, P. M., Columbia '44, Greenwich
Dean, R. J., Georgetown '67, Fayetteville, North Carolina (New Haven County)
°Dearani, A. C., Georgetown '53, Norwalk
DeBernardo, R. L., Georgetown '63, Bridgeport
°DeBonis, G. M., Northwestern '66, Bridgeport
°DeCarlos, K. A., Tufts '64, Hartford
°deChabert-Ostland, J. G., Paris '34, Hartford
De Dios, V. K., Santo Tomas '64, New Haven
°Deduk, N. T., Woman's Med. Coll. Pa. '54, Seymour
°Deduk, V. J., N. Y. Med. Coll. '54, Seymour
°de Escobar, D. M., Un. Sao Paulo '54, Waterbury
°deForest, G. K., Yale '32, New Haven
DeFrance, J. H., Jefferson '69, Danbury
°DeFusco, L. A., Georgetown '62, East Hartford
DeGraff, A. C., Jr., N. Y. U. 55, Hartford
deGroot, T. J., Nat'l. Un. Ireland '66, Norwich
°DeJesus, C. P. V., Santo Tomas '62, West Haven
Dekker, P.T., Univ. Michigan '70, Hartford
DeKlyn, W. B., Temple '41, Rowayton
°Delany, F., Columbia '45, Greenwich
°Delgado-Fourzan, E., Mexico '43, Hartford
°Delgrego, A. L., George Washington '30, Boca Raton, Florida, (New Haven County)
°D'Elia, F. G., Georgetown '53, Fairfield
°D'Elia, P. F., Tufts '44, New Haven
°DeLibero, A. F., Rome '45, Bridgeport
°Della Porta, J., Univ. of Naples '52, New Haven
°Della Valle, L., Bologna '60, Hamden
Delligan, F. W., Georgetown '41, Hartford
Delohery, C. L., Temple '26, Lake Worth, Florida (Fairfield County)
DeLuca, J. V., Georgetown '47, Bridgeport
°DeLuca, V. A., Jr., Long Island Coll. Med. '48, Derby
°DelVecchio, L. F., Georgetown '31, Stratford
DeMaio, J. T., Tufts '60, Hartford
Deming, A. S., Harvard '40, Hartford
Deming, E. G., Harvard '40, Hartford
°Demir, P., New York Med. Coll. '59, New Haven
°Demko, R. M., N. Y. U. '54, Manchester
°DeNegre, L. M., Seton Hall '60, Milford
°DeNicola, M., Yale '54, Prospect
°Dennen, P. C., Univ. Buffalo '49, Waterbury
°Denton, C. R., Vermont '48, Hartford
°DePasquale, J. A., Pennsylvania '36, Hartford
°DePetrillo, B., Bologna '54, Waterbury
°DePonte, R. J., Yale '61, New Haven
Derby, J. H., McGill '60, New London
°Deren, M. D., Syracuse '33, Bridgeport
°Derkash, S. L., Hahnemann '40, Greenwich
°Desmond, C. T., Boston U. '38, Ocean City, Maryland (Hartford County)
D'Esopo, J. N., McGill '31, Hamden
de Suto-Nagy, G. I., Royal Hung '35, West Haven
°de Suto-Nagy, I. K., Royal Hung '15, New Haven
°DeTora, A. M., Boston '40, Stafford Springs
Deutchman, R. F., Un. Berne '66, Stamford
°Deutsch, J., Hahnemann '48, Hartford
Deva, V., Bangalore Med. Coll '63, New Haven
Devers, T.J., Jefferson '70, Kensington
°DeVille, D. B., Nat'l. Univ. Ireland '56, Middletown
°DeWitt, E. N., Pennsylvania '17, Fairfield
Dey, F. L., Northwestern '44, New London
Dhandapani, B., Madras Medical '63, Vernon
Diamond, E. H., Breslau '32, Norwalk
Diamond, E.J., Loma Linda Un. '72, Middletown
Diana, P. W., Jr., Pennsylvania '69, Southington
°Diaz, A., Mexico '56, Putnam
°Diaz, O. B., Univ. Santo Thomas '68, Bristol
°Dickinson, G. H. Vermont '46, Meriden
°Dickinson, W. W., Pennsylvania '42, Yalesville
Dickson, C. M., Jefferson '66, Hartford
Dickson, H.M., Pennsylvania '58, Kodiak, Alaska (New London County)
°DiCorato, F., Bari '50, Norwalk
Diggs, A. M., Maryland '52, Waterbury
°Dignam, B. S., Yale '35, Thompsonville
°DiGrazia, P. V., Lausanne '61, Brookfield
Dila, C.J., Wayne State '62, Bridgeport
°DiLorenzo, S. F., Tufts '43, Waterbury
DiMauro, L. M., Georgetown '72, Cheshire
DiMeola, H. J., Albany '68, Rockville
°Dimlich, H. K., Hahnemann '58, West Simbury
°Dineen, J. P., Cornell '55, Derby
Dinep, M., Bern '56, New Britain
°Dingman, P. V., Columbia P. & S. '42, Waterbury
°Dion, A. J., Tufts '28, Hartford
°Dion, J. A., Georgetown '37, Hartford
DiPasquale, N. M., Univ. Bologna '69, Derby
°DiSabatino, C. A. Jr., Boston Univ. '72, New Haven
°Diskan, A. E., Temple '37, Manchester
°Diters, E. N., Tennessee '48, Collinsville
Dobbs, W. G. H., Rochester '34, Scottsdale, Arizona (Litchfield County)
Dobrow, R. J., Harvard '60, Hartford
°Dobson, J. P., Columbia '36, Arcadia, Florida (Fairfield County)
Dock, D. S., Johns Hopkins '54, New Haven
°Doctor, D. W., N. Y. Med. '52, Westport
°Doctor, J. E., Downstate Med. Ctr. '59, Westport
°Doctoroff, S. J., Columbia '64, New Britain
Dodd, A. H., Temple '48, Willimantic
Dodd, S. G., Temple '48, Willimantic
°Doering, E. G., Bonn '53, Greenwich
°Doering, R. W., Kansas '48, Bridgeport
°Doerr, W. J., Erlangen '40, Hartford
Dogali, M., McGill '70, Bridgeport
°Doheny, J. J., N. Y. Med. Coll. '56, Derby
Doherty, H. E., Georgetown '55, Bridgeport
Doherty, R. C., Vermont '47, West Hartford
Dolan, E. P., McGill '50, Bridgeport
Dolan, V.L. State Univ. New York '56, Baltimore, Maryland (Litchfield County)
Dolberg, H. M., Leiden '58, Westport
Dolinsky, A. H., N. Y. Med. School '51, New Haven
°Dombrowski, E. H., St. Univ. New York '61, Stamford
Donadio, J. A., Yale '66, Middletown
Donahue, G.M., George Washington Univ. '74, Enfield

*Donnelly, J., Liverpool '38, Hartford
Donnelly, J. E., State Univ. New York '58, Bethany
Donnelly, J. F., State Univ. New York '58, Seymour
*Donnelly, V. P., McGill '56, Bridgeport
Donnelly, W. G., Jr., Creighton '68, Sharon
D'Onofrio, G. R., Jr., George Washington Univ. '67, Stamford
*Donohue, S. M., Tufts '48, Windsor
*Donovan, J. F., Harvard '52, Hartford
*Donovan, T. J., Harvard '46, Hartford
Donovan, W. F., Boston '31, West Hartford
*Donshik, P. C., N. Y. Med. Coll. '68, Hartford
Dooley, J. A., St. Louis '55, Portland
*Dorantes, J., Mexico '54, Old Lyme
Dorfman, G., Tulane '50, New Britain
*Dorian, E., Maryland '37, New Britain
Dorison, E. E., Berne '56, Westport
Dorr, J. R., Yale '57, Darien
Dougherty, A. J., Univ. Coll. Galway '60, Hartford
Doura, M. E., Brussels Med. Sch. '70, Bristol
Dowaliby, J. M., II, Yale '67, New Haven
*Dowling, K. V., New York '57, Hartford
*Downer, M. C., Boston '29, West Hartford
Downing, L. C., Meharry '60, New Haven
Downs, E. F., Johns Hopkins '37, Bronxville, New York (Litchfield County)
Doyle, F. W., Yale '55, Willimantic
*Dragon, R. E., Yale '66, New Britain
Drakonakis, A. C., Univ. Athens '61, Branford
Draper, T. F., Queen's '55, Newtown
Drennan, J. C., Cornell '61, Newington
Dressler, D. M., Chicago '64, New Britain
Dreyer, N. P., N. Y. U. '67, Stamford
Driscoll, A. J., Boston '47, Bristol
*Drobnes, S., Freiburg, '37, Norwich
Drury, R. W., Duke '64, Glastonbury
D'Souza, A. G., Bangalore Med. '66, Wilton
*Dubissette, M. E., Howard Univ. '50, Stamford
*Duboczy, J. B. St. Un. New York '67, Hartford
*Dudac, T. W., Georgetown '33, Southington
*Dudley, J. P., Minnesota '57, Los Angeles, California (Fairfield County)
*Dudzic, A. L., Ottawa '58, Waterbury
*Duerr, L.S., Vermont '73, Bridgeport
Duers, J. A., Albany Med. '64, Willimantic
Dufort, R. T., Georgetown '64, North Grosvenordale
*Dugas, J. A., Loyola '38, Bridgeport
Duke, M., N. Y. U. '54, Manchester
*Duksa, W. J., Georgetown '37, West Hartford
*DuLeep, K. S., Osmania Med. Coll. '57, Westport
Dunn, E., Upstate Med. Ctr. '51, Waterbury
Dunn, H., Amsterdam '58, Hartford
*Dunn, M. L., N. Y. U. '43, New Britain
*Dunne, M. J., Queen's Univ. Belfast '58, Alexandria, Virginia (Hartford County)
*Dunsmore, R. H., Hahnemann '43, Hartford
Durkee, R. E., Jr., Harvard '36, West Hartford
Durrani, J., King Edward Med. Coll. '63, Enfield
Dushane, J. E., Tufts '36, Hartford
Dutton, R. S., McGill '63, Winsted
*Duzmati, P. P., Jefferson '36, Bridgeport
Dworken, D. S., Boston '55, Bridgeport
Dwyer, F. D., Med. Coll. Pa. '67, New Haven
Dwyer, G. K., Rochester '43, Norwalk
*Dwyer, H. L., Northwestern '43, New Haven
*Dwyer, R. D., Georgetown '67, Essex
*Dwyer, R. T., Tufts '50, Granby
*Dwyer, W. J., Tufts '50, Granby
Dyer, C. E., Tufts '28, New London
Dyer, C. F., Cornell '47, New London
*Dyer, R. H., Jr., Cornell '63, Waterbury
*Dzubaty, M., Buffalo '48, West Haven
Eadie, F. S., Tufts '48, Norwich
Eagan, E.C., Albany '43, Hartford
*Earle, L. H., Jr., Tufts '50, West Hartford
*Eaton, H. E., Vermont '49, Pomfret
Ebbert, A., Jr., Virginia '46, New Haven
*Ebers, T. M., Nebraska '31, Sedona, Arisona (Hartford County)
*Echental, A. A., Geneva '63, Stamford
Eckels, H. S., Hahnemann '48, Bridgeport
Ecker, M. D., N. Y. U. '70, Stamford (New Haven County)
Eckhart, K. L., Temple Univ. '67, Portland
*Eckhardt, W. F., Jr., N. Y. U. '53, New Canaan
*Eddy, J. R., Vermont '53, Manchester
*Edelson, M. H., Chicago '55, New Haven
*Edelstein, B. L., Hahnemann '60, Bloomfield
Edelstein, S. W., Hahnemann '57, Hartford
Edgar, E. E., Tufts '61, East Lyme
*Edgar, M. S., Jr., Columbia '59, Norwich
Edkin, R. E., Howard '59, Hartford
Edmonstone, W. M., Rochester '43, Mystic
Edson, D. H., Vermont '42, Danbury
*Edson, R. C., Jefferson '31, St. Augustine Shores, Florida (Hartford County)
*Edwards, L. E., George Washington '47, Fairfield
*Egee, J. B., Hahnemann '34 Southbury (Fairfield County)
Eguia, J. M., Nat'l. Univ. Cordoba '66, Waterbury
*Ehrlich, E. L., Bern '58, West Hartford
Ehrlich, M. C., N. Y. Med. Coll. '66, Willimantic
*Eilbergas, M., Zurich '41, Windsor Locks
Elimas, A., Tufts '30, Bridgeport
*Eisen, S. L., Albany '66, Waterbury
*Eisenberg, J. H., State Univ. N. Y. '62, Bridgeport
*Eisenberg, S. E., Rochester '39, New Britain
Elazequi, I. A., Santo Tomas '65, Manchester
Elazegui, R. A., Santo Tomas '69, Bloomfield
*Elder, W. J., Charing Cross Hosp. '55, Stamford
*Elgosin, R. B., McGill '40, Madison
Elias, J.J., Madrid Univ. '71, Norwalk
*Eliasoph, J. L., N. Y. U. '49, Stamford
Elisofon, R. M., S. U. N. Y. '67, Ridgefield

Elliott, F. G., Jr., Howard '40, Bridgeport
Elliott, J. R., Boston '32, Bridgeport
Ellis, G. D., Albany '50, Waterford
*Ellis, L. G., Jefferson '20, Rocky Mount, North Carolina (Hartford County)
*Ellis, W. A., Jefferson '40, Hartford
*Ellison, L. H., Boston '64, Hartford
*Ellison, M. M., Rochester '43, New London
*Ellrich, D. L., Jefferson '28, Westport
Ellsworth, M H., S. U. N. Y. '68, Putnam (Hartford County)
Ellzey, W. J., Tulane '64, Willimantic
Elser, J. P., Georgetown '56, Naugatuck
Ely, J. G., Harvard '23, Lyme
*Emery, F. M., Columbia '29, Guilford
Emmel, R. C., Cornell '45, West Hartford
*Eng, G. O., Yale '49, Stamford
Engel, H. P., Durham, England '55, Milford
Engel, M., Un. Chicago '72, Stamford
*Engelke, H. A., N. Y. Med. Coll. '59, Gales Ferry
Enowitch, B. I., Univ. Geneva '66, Hartford
*Enriquez, A. R., San Marcos '63, New Britain
*Ephraim, P. D., Albert Einstein '65, Orange
*Epstein, B., Vienna '36, Danbury
Epstein, E. J., N. Y. Med. Coll. '45, Pound Ridge, New York (Fairfield County)
*Epstein, J. I., Yale '43, Middletown
*Erami, M., Geneva '56, Bristol
Eras, P., S. U. N. Y. '60, Bristol
Erdelyi, P. G., Pazmany Peter '41, Stamford
Ergin, M. T., Istanbul '50, Hartford
Erichson, R. B., Cornell '60, Stamford
Eriksen, L., Un. Queensland Sch. Med. '69, Milford

°Errera, P., Harvard ’53, West Haven
°Errico, A. V., Nales ’59, North Haven
°Escobar, S., Siena, Italy ’70, Bridgeport
Esdaile, W. W., Meharry ’62, New Haven
Esfahanian, S., Tehran ’65, Norwich
°Eslami, M. S., Tehran ’57, Waterbury
Esposito, J., Louvain ’71, Cheshire
°Esposito, J. J., Columia ’37, Bridgeport
°Esposito, M. J., Boston ’49, Meriden
Estela, J. A., Un. Santo Tomas ’64, Bristol
°Estrada, J. A., Santo Domingo ’54, New Milford
Etkin, T. H., Yale ’71, West Haven
°Etkind, E. L., Albert Einstein ’62, New Haven
°Etkind, M. G., Maryland ’33, New Haven
°Evans, D. T., Vermont ’62, Newtown
°Evans, J. E., Mississippi ’68, Hartford
°Evans, T. S., Columbia ’21, New Haven
°Evarts, J., Columbia ’29, Millerton, New York (Litchfield County)
Ewell, M.K., Un. Pennsylvania ’36, Greenwich
Exconde, F., V., Jr., Far Eastern Univ. ’62, Danbury
Fabbri, R., Jr., Yale ’64, New Haven
Fabian, R. L., Tufts ’66, Waterbury
°Fabrizio, T. I. J., Helsinki ’57, Norwalk
°Fabro, J. A., Tufts ’37, Torrington
°Fagen, F. J., Boston ’38, New London
Fagen, F. X., Cornell ’33, Wethersfield
Fahy, R. A., Royal Coll. of Surg. Ireland ’68, Hartford
Faiaz, E. K., Tehran ’51, Hartford
°Fairlie, C. W., J., Columbia ’41, Hartford
°Fakkel, M. J., Tufts ’50, Stamford
°Falk, M., Lausanne ’61, Naugatuck
Falk, S., N. Y. U. ’54, Bristol
Falkenstein, R. J., Yale ’69, Danbury
°Falsone, J. J., Long Island ’47, Norwalk
Fand, R., N. Y. U. ’62, Danbury
°Fanning, J. B., Nat’l. Univ. Ireland ’57, North Haven
°Fanslow, A. W., New York ’55, Stratford (New Haven County)
Farber, L. R., S. U. N. Y. ’65, New Haven
Farland, V. L., Montreal ’25, Fort Lauderdale, Florida (Hartford County)
°Farraye, J. J., Univ. of Bologna, Italy ’70, Avon
°Farrell, H. F., N. Y. Medical ’54, Torrington
Farrell, J. E., Georgetown ’52, Stamford
Farrell, R. F., Vermont ’42, Stamford
°Fasanella, R. M., Yale ’43, New Haven
°Fasano, L. A., New York ’55, New Haven
Fauliso, R. J., Tufts ’60, Hartford
°Favata, J., Lausanne ’58, Waterbury
Fay, W. J., Harvard ’14, Hartford
Fazzari, P. J., Albany Med. Coll. ’67, Newington
°Fazzone, A. C., Seton Hall ’61, Bridgeport
°Fazzone, P. R., Yale ’58, New Haven
°Fearon, H., St. Univ. New York ’27, Washington
Fearon, R. E., Harvard ’61, New Haven
Federico, F. N., Jefferson ’65, Bridgeport
°Feeney, T. M., Boston ’36, West Hartford
°Feierstein, S., Zurich ’63, Huntington
Feinglass, E. J., Johns Hopkins ’70, New Britain
Felber, J. H., Vienna ’45, West Hartford
°Felder, E. A., Jefferson ’48, Darien
Feldman, M. G., Boston ’58, Bridgeport
°Feldman, R. A., Albert Einstein ’66, Waterbury
°Feldman, S. M., Boston ’54, Bridgeport
Feller, C. W., New York ’67, Norwalk
Felsenfeld, H.W, Yale ’67, West Hartford
Fenaughty, R. W., St. Univ. N. Y. ’57, New Britain
°Fenelon, E., Faculty of Medicine, Haiti ’62, Hartford
°Fenn, J. E., Yale ’61, New Haven
Fenney, P. W., Tufts ’31, Newington
Fenster, M., S. U. N. Y. ’63, Norwalk
°Fenton, R. H., Lausanne ’57, New Haven
Ferando, L. J., Bologna ’62, New Haven
Ferguson, D.D., Univ. Pittsburgh ’71, Bristol
°Ferguson, H. K., N. Y. U. ’32, Waterford
°Ferguson, J. F., Jr., Yale ’40, Wallingford
Ferguson, R.P., Cornell ’72, Bloomfield
°Fernand, E. G., Yale ’55, Danbury
Fernando, K.A., Fac. Med. Un. Ceylon ’70, Hamden
Feroleto, G. J., Vermont ’59, Stratford
°Ferranti, R. D., Rome ’52, North Haven
°Ferrari, D. A., Columbia ’63, Manchester
°Ferraro, R. W., Creighton ’63, Waterbury
°Ferrero, V., Catholic Univ. Rome ’68, Hartford
°Ferris, J., Columbia ’43, New Milford
Fessel, J. M., Yale ’63, New Haven
°Feuer, C. R., New York Univ. ’62, Stamford
Feuer, M. W., Albert Einstein ’69, Hartford
Feuer, P. M., N. Y. Med. Coll. ’70, Fairfield
°Fezza, A. J., New York ’65, Hamden
°Fezza, M. L., New York ’54, Hamden
Fialkoff, R. Havana-Cuba ’48, Manchester
Fiducia, J. P., Queen’s Un. Belfast ’65, Middletown
°Fieldman, A., Tufts ’51, Hartford
°Fierberg, A. A., Pittsburgh ’49, Hartford
°Fierman, L. B., Western Reserve ’46, Portland (New Haven County)
°Figueroa, F. J., Mexico ’50, Enfield
Filer, H. L., Jr., Yale ’46, New Haven
°Filewicz, S. P., N. Y. Med. Coll. ’59, New Britain
°Filson, R. M., Queen’s ’15, West Hartford
°Fincke, C. L., Harvard ’28, Stamford
°Fine, B., Jefferson ’32, Stamford
Fine, N. L., Downstate Med. Ctr. ’64, Derby
°Fink, H. D., Louisville ’54, Milford
°Fink, M. E., St. Univ. New York ’57, Guilford
Fink, T., Hahnemann Med. Coll. ’71, Bethel
Finkelstein, J., Un. Pennsylvania ’60, Sharon
°Finkelstein, W., Harvard ’34, Waterbury
°Finlay, J. R., Hahnemann ’46, Greenwich
°Finn, A. J., Jr., Jefferson ’60, Torrington
°Finn, F. W., Columbia ’38, Greenwich
Finn, J. E., Georgetown ’64, Waterbury
°Finnie, J. N., Un. Alberta ’63, Torrington
Finseth, F. J., Harvard ’66, New Haven
°Fischbein, C. A., S. U. N. Y. ’70, Waterbury
°Fischbein, F. I., N. Y. Med. Coll. ’63, Middletown
°Fischer, D. G., Vermont ’57, Hamden
°Fischer, D. S., Harvard 55’, New Haven
Fischer, J. J., Harvard ’61, New Haven
Fischer, N. R., Universidad de Chile ’69, Bloomfield
°Fischl, R. A., Durham, England ’51, Danbury
°Fishbone, G., Univ. Sheffield ’58, Hamden
Fisher, L. C., Columbia ’55, Stamford
°Fisher, M., L. I. Coll. Hosp. ’20, Greenwich
Fisher, R. L., Columbia ’40, Sharon
°Fisher, R. L., Yale ’59, Hartford
°Fisher, W. H., Jr., Tufts ’58, Waterbury
Fishman, R. S., Geneva ’56, Hartford
Fiskio, P. W., Yale ’27, East Haven
Fitzgerald, J. R., Yale ’57, East Hartford
Fitzgerald, T. S., Vermont ’68, Stamford
Fitzpatrick, E. E., Maryland ’15, St. Petersburg, Florida (New Haven County)
°Fitzpatrick, E. J., McGill ’42, New Haven
°Flagg, J. A., Temple ’51, Bridgeport
°Flagg, S. V., Columbia ’62, New Haven
Flaherty, M. V., Georgetown ’43, Hartford
Flamm, G. H., Long Island ’43, New Haven
°Flanagan, E. P., Univ. Coll. Dublin ’58, Manchester
Flanagan, G.M., Univ. Pennsylvania ’47, Norwich
Flanagan, J. A., Georgetown ’67, Middletown
°Fleck, S., Harvard ’40, New Haven
Fleisch, M. C., Tufts ’40, West Hartford

Fleisher, P., Western Ontario '44, Bridgeport
°Fleisher, P. R., Basle '58, New London
Fleming, R. J., Tufts '56, Stamford
°Flemister, A. S., Howard '54, Bridgeport
Flescher, R., Harvard '61, Hartford
Fletcher, R. G., Harvard '53, Colebrook
Flint, J. F., Columbia '66, Waterbury
°Floch, M. H., New York '56, Norwalk
°Flom, L., N. Y. U. '50, Fairfield
Flores, J. C., Cordoba Nat'l. Un. '60, Ansonia
Flores, P. G., Un. Santo Tomas '63, Bristol
Flores, S. E., Un. Nuevo Leon '68, Meriden
°Flynn, C. T., Jr., Yale '43, Meriden
Flynn, E. J., Long Island '43, Norwalk
°Flynn, F. J., Virginia '43, Newington
°Flynn, H. A., Yale '27, New Haven
°Flynn, J. B., Jefferson '44, Meriden
Flynn, J. D., Georgetown '64, Willimantic
°Flynn, J. H., Yale '45, New Haven
°Flynn, T. G., Georgetown '59, New Canaan
Flynn, W. H., Maryland '16, Bristol
Fodor, P.B., Univ. Wisconsin '66, Greenwich
Fogel, D. H., Duke '38, Greenwich
Fogelman, H., Lausanne '52, Stamford
°Fogg, L. B., Washington '60, East Hartford
°Foley, F. X., Boston '34, Fairfield
°Folk, J. J., Georgetown '65, New Britain
°Fons, A. L., III, Yale '57, West Hartford
Foohey, F. C., Laval '43, Hartford
°Foote, F. M., Yale '33, Wethersfield
°Forbes, J. D., Temple '64, Southbury
°Force, B. R., N. Y. Med. Coll. '42, Groton
Ford, J. R., Albany '64, Windsor
°Forman, B. H., Downstate '68, New Haven
Forman, J. B., Yale '39, New Haven
Forman, M. A., Un. Wisconsin '64, Stamford
°Formica, J. J., Tufts '55, New Britain
°Fornshell, R. P., Harvard '52, Danbury
°Fortier, A. J., McGill Univ. '72, Hartford
Fortin, V. L., Jr., Howard '59, Hartford
°Foss, B. A., Boston '54, New London
°Foster, J. H., Columbia '54, Hartford
°Foster, J. H., Pennsylvania '17, Lewisburg, Pennsylvania (New Haven County)
Foster, K. W., Jr., Tufts '57, West Hartford
Fote, J. J., New Jersey '70, West Hartford
°Fournier, R. E., Tufts '50, New Haven
°Fowler, G. A., Columbia '40, Santa Fe, New Mexico (Litchfield County)
°Fowler, R. N., Columbia '34, Ramsey, New Jersey (New London County)
Fox, B. M., Tufts '55, Hartford
Fox, E. F., N. Y. Med. Coll. '58, Bristol
°Fox, G. G., Harvard '34, Meriden
°Fox, H. J., Hahnemann '52, Bridgeport
°Fox, J. C., Jr., Johns Hopkins '20, West Hartford
Fox, M., Geneva '60, Stamford
°Fox, M. I., Cornell '53, Milford
°Foye, G. J., Un. Coll. Dublin '65, Brookfield
°Fraknoi, J., Pazmany Peter Univ. '34, Wallingford
Francescon, S. D., Georgetown '68, Meriden
Francis, H. L., Howard '48, Waterbury
Franco, J. E., Tufts '40, Hartford
°Frank, H. D., Harvard '50, Bridgeport
Frank, M.J., New York Med. Coll '70, Old Saybrook
°Frank, L. M., Pennsylvania '45, West Hartford
Frank, R. D., U. C. L. A. '65, Greenwich
Frank, S. M., New York Med. '73, New Haven
Frankel, S. A., Duke '46, New Haven
Franklin, D. N., Columbia '56, Wilton
°Franklin, J. B., New Jersey '61, Hartford
°Franklin, M., Maryland '56, San Diego, California (Fairfield County)
°Franz, A., II, Tufts '57, Meriden

°Franz, A., II, Tufts '57, Meriden

Fraser, R.A., St. Louis Univ. '69, New London
Frazier, W. H., Yale '69, New Haven
°Frechette, E. J., Jr., N. Y. Med. Coll. '47, New Haven
°Fredericks, E. J., Cornell '62, Hartford
Frederickson, R. W., N. Y. Med. Coll. '51, Hartford
Freedman, G.S., Columbia P & S '64, New Haven
°Freedman, J. K., Tufts '55, New Haven
°Freedman, M., Tufts '32, Hamden
Freedman, M. E., N. Y. Med. Coll. '47, Hartford
Freehill, P. J., Chicago '65, North Haven
Freeman, D., Yale '24, New Haven
Freeman, J. J., Temple '33, Storrs (Windham County)
Frenkel, H. H., Boston '52, Bridgeport
°Freye, H. B., Duke '59, Mystic
°Freymann, J. G., Harvard '46, Hartford
°Friedberg, I. H., Tufts '37, Newington
°Friedman, C. R., Cornell '46, New Haven
Friedman, F. P., Albert Einstein '67, Norwich
Friedman, M. A., Univ. Michigan '63, Stamford
Friedman, N. H., Tufts '33, Stratford
Friedman, R. M., Puerto Rico '67, Willimantic
°Friedman, S. I., Tufts '68, Meriden
Friedmann, K. R., Hahnemann '57, Old Lyme
°Friel, P. B., National '50, West Hartford
°Friend, A. E., Queen's '22, Manchester
°Friend, H. B., Queen's Univ. Canada '59, Hartford
Fritz, H. L., N. Y. Med. Coll. '57, Meriden
Froeb, R.L., Univ. Illinois '69, New Britain
°Fromm, S. M., Texas '48, Bridgeport
Frost, L. H., Vermont '13, Forestville
Frumkin, S., Wisconsin '71, Westport
Fuchs, H. M., Un. Heidelberg '67, Norwalk
Fugal, J. P., S. U. N. Y. '67, Woodmont
Fuhrmann, J. M., Long Island '43, Woodbridge
Fulchiero, E. A., Turin '40, New London
°Fuldner, R. V., Columbia '33, New Haven
°Fuller, L. G. A., Un. Heidelberg '65, Waterbury
°Furniss, W. E., Tufts '40 Bristol
Gabrielle, F. M., Jr., Bologna '64, West Hartford
°Gacso, W. J., Tufts '62, Fairfield
Gaffney, J. J., Loyola '30, Danbury
Gaffney, R. E., N. Y. Med. Coll. '52, Fairfield
°Gage, J.R., Northwestern '64, Newington
Gager, F.V., Un. Louisville '73, Hamden
°Gagliardi, J. M., Jr., Jefferson '60, Derby
Gagnon, P. M., Un. Ottawa '64, East Hartford
°Gahm, N. H., Tufts '61, Hartford
Gaines, G. A., Women's Med. Coll. '51, Waterbury
Gaines, J. D., Stanford Un. '66, New Haven
°Gaito, R. A., Yale '58, New London
Galasyn, V. D., Un. Tennessee '65, Canterbury
°Galen, J. H., Long Island '42, Derby
Galen, M. A., Hahnemann '67, Hartford
°Galinsky, D., Tufts '35, Hartford
Galland, L. D., New York Un. '68, Winsted
°Gallivan, J. N., Tufts '35, Wethersfield
°Gallo, E. P., Jefferson '65, Winsted
°Gallo, F., Jefferson '34, Winsted
°Gallo, G. A., N. Y. Med. '63, Greenwich
Gallo, S. J., Maryland '57, Middletown
Galloway, J. A., Vanderbilt '62, Torrington
°Galloway, S., Bowman Gray '65, New Haven
Gallup, J. W., Tufts '55, Sharon
Galvin, J. R., Tufts '64, Glastonbury
°Gambarini, A. J., Buenos-Aires '50,West Hartford
°Gammill, J. F., Columbia '48, Darien
Gandel, P. N., Tufts '64, Bloomfield
°Gandy, R. A., Virginia '27, Stamford
Ganesan, M., Un. Ceylon '69, Milford
°Ganguli, P. C., Calcutta Un. '60, Middletown
°Garb, A. E., St. Univ. New York '55, Cos Cob
Garbus, S.B., Un. Genera, Switzerland '62, Ridgefield

Garcia, F.G., Univ. of The East '72, Rockville
Gardner, C. W., Jr., Chicago '48, Fairfield
Gardner, S. M., Colorado '32, Fairfield
Garfinkel, H.B., Tufts Univ. '65, Danbury
Gargano, P. A., Loyola-Stritch '68, Bridgeport
Gariepy, J. A., Yale '54, Bridgeport
Garofalo, G. A., Louvain '58, Bridgeport
°Gaorfalo, M. L., Naples '35, East Haven
°Garrell, M., Vermont '52, Fairfield
Garrity, J. D., Georgetown '57, Monroe
Garver, E. M., Georgetown '70, Bridgeport
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Gates, W. L., Syracuse '44, Wallingford
Gaudio, A. R., Yale '63, Hartford
°Gaynes, P. M., St. Univ. New York '63, Fairfield
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Gazi, G. R., Dacca Med. Coll. '68, Wethersfield
°Geanuracos, G. J., Long Island '44, Bridgeport
Geary, F. L., Georgetown '63, Hartford
Geary, W. J., Georgetown '64, Hartford
°Gedeon, P. E., Beirut '45, Waterbury
Geer, E. T., Temple '44, Stamford
Geetter, A. L., Pennsylvania '67, Bloomfield
°Geetter, D. M., Jefferson '59, Hartford
°Geetter, I. S., Jefferson '29, Hartford
°Gefter, W. I., Univ. Penn. '39, Stamford
°Geha, A. S., Am. Un. Beirut '59, New Haven
°Gencarelli, A. F., Buffalo '39, Branford
°Gens, J. P., Yale '37, Norwalk
°Gentile, A. L., Boston '29, New Haven
°Genvert, H., Yale '36, Norwalk
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George, A. B., Athens '54, Hartford
George, L., Madurai Med. Coll. India '69, Enfield
°George, R. C., Yale '66, Norwalk
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Gerber, E., Jr., N. Y. Med. Coll. '51, Naugatuck
°Gerber, J. S., Heidelberg '65, Hartford
Gerber, W. H., Heidelberg '65, West Hartford
°Gerent, W. P., Hahnemann '47, West Hartford
°Gerity, P. J., South Carolina '46, New London
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German, W. J., Harvard '26, Woodbridge
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Gersten, S. P., Colorado '67, Middletown
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°Gerster, J. W., Columbia '44, Greenwich
°Gerz, H. O., Dusseldorf '53, Middletown
°Getnick, R. A., Yale '68, Waterbury
Gettings, J. A., Jefferson '16, New Haven
Gevalt, F. C., Jr., Columbia '40, Sharon
Gfeller, R. J., Georgetown '58, Thompsonville
Ghabrial, S. L., Ein-Shams Un. '53, Manchester
°Ghaussy, A. A., Hamberg '62, Portland
°Ghaussy, R., Un. Berlin '74, Colchester (Middlesex County)
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°Gianfranceschi, G. R., McGill '48, Danbury
Giangrasso, A. E., Creighton '58, Trumbull
Giardi, L. P., Vermont '48, Hartford
°Giardina, D. D., N. Y. Med. Coll. '50, Norwalk
°Giarnella, E., Modena '53, Hartford
Giarnella, R.A., Univ. of Pisa '71, New Britain
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°Gibney, R. A., Univ. Bologna '69, Waterbury
°Gibson, D. W., George Washington Univ. '71, New Haven
Gibson, F., McGill '41, New Haven
°Gibson, F. D., Syracuse '35, Hartford
°Gibson, L. W., Tufts '62, Willimantic
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°Gilbert, R. K., Cambridge '54, Waterbury
°Gildea, M. A., Buffalo '24, Bridgeport
°Giles, N. W., Vermont '21, Stamford
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°Gill, A. J., N. Y. S. U. '62, Fairfield
°Gill, N. P. Georgetown '52, Bridgeport
°Gillcash, R. S., Yale '61, Willimantic
°Gilligan, R., Loyola-Stritch, '74, Stamford
°Gilman, R. L., Harvard '29, Storrs (Windham County)
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°Giobbe, M. E., Tufts '29, Torrington
Gionfriddo, J. R., Georgetown '51, West Hartford
Giosa, N. A., Boston '52, Wethersfield
°Gipstein, E., Jefferson '31, New London
Giuliano, L. A., Tufts '32, Stratford
°Giuliano, S., Tufts '30, Hartford
°Given, J. B., Cornell '50, Hartford
Gladstone, T. M., Vermont '68, New Britain
Glaser, G. H., Columbia '43, New Haven
°Glaser, W., Tufts '38, New Haven
°Glass, H. L., Vanderbilt '49, Bristol
Glass, M. K., Harvard '55, Bridgeport
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°Glass, W. I., Cornell '38, Bridgeport
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°Glasser, S. T., McGill '28, South Lyme
°Glassman, H. H., Indiana '56, Hartford
°Glassman, I., N. Y. Med. Coll. '51, New Haven
Glassman, R. M., Univ. Aberdeen '69, Waterbury
Glaubman, H. M., Yale '27, Hartford
°Glazer, M., Tulane '22, New Haven
Gleich, E.H., N.J. Coll. Medicine '73, Madison
°Glenn, J. S., Cornell '65, Torrington
°Glenn, W. W. L., Jefferson '38, New Haven
°Glenney, C. C., Tufts '52, Norwich
°Glickman, M. G., Washington Un. '63, New Haven
°Glike, F. P., Yale '41, Meriden
°Gloetzner, H. J., Temple '41, Norwalk
Glucksman, M. L., Washington '59, Danbury
Glugover, D. B., Chicago '62, Willimantic
°Gobbee, R.A., Univ. Buenos Aires '67, Waterbury
°Godar, T. J., Tufts '56, Hartford
Godfried, M. S., Yale '36, Woodbridge
Godlash, K. M., Georgetown '61, Hartford
°Godley, J. A., Yale '62, Orange
Goehausen, M. C., St. Louis '47, Westport
°Goerner, J. R., Yale '43, Watertown
Goetcheus, J. S., Western Reserve '64, Essex
°Goetsch, J. B., Rochester '38, New Haven
Goff, C. W. Un. Pennsylvania '74, Essex
Goffinet, S. B., Johns Hopkins '60, Woodbridge
Gofstein, R. M., Yale '51, Stamford
°Golbey, R. B., N. Y. U. '49, Stamford
Gold, B., State Univ. New York '57, Hartford
Gold, H., Lausanne '60, Hartford
Gold, H. C., Zurich '53, Newington
°Gold, J. D., Un. Tennessee '68, New Haven
Gold, L., Vienna '36, Stamford
°Gold, L. H., N. Y. Med. '32, Hartford
Goldberg, B., Downstate Med. Ctr. '68, Milford
°Goldberg, I. S., Creighton '33, Torrington
Goldberg, M. H., Albany '61, Hartford
°Goldberg, M. M., Ottawa '54, Danbury
Goldberg, P. A., New York Med. Coll. '67, Stamford
°Goldblatt, J. S., Med. Coll. of Virginia '67, Norwich
°Goldblatt, P. B., Pennsylvania '65, New Haven
Golden, A. J., Yale '50, Wethersfield

°Goldenberg, A., Boston '54, West Hartford
°Goldenberg, I. S., Boston '51, New Haven
°Goldenberg, J. J., Dalhousie '26, Hartford
°Goldenberg, P. T., Boston '46, Hartford
Goldenring, H., N. Y. U. '49, Branford
Goldenthal, C., Yale '44, Hartford
Goldenthal, S., Yale '51, New Haven
Goldfarb, J., Texas '50, Stamford
°Goldfarb, S. L., Milan '38, Stamford
Goldman, A., Zurich '53, Danbury
Goldman, G., Yale '10, Wallingford
Goldman, P. H., Geneva '57, Hartford
°Goldman, R.L., Maryland '63, Hartford
Goldstein, J., Med. Acad. Lodz '48, New Haven
°Goldstein, L. H., Univ. Penn. '68, Danbury
°Goldstein, P. S., Yale '49, New Haven
Goldstein, W. B., Washington '61, Danbury
°Goldys, F. M., Tufts '26, Danbury
Golenbock, R.B., Albert Einstein '72, Bethel
°Golia, U. V., Long Island '45, New Haven
Golkar-Sisani, F., Teheran '65, Manchester
°Golino, E. F., Rochester, '36, East Hartford
Golub, G. R., Tufts '60, Hartford
Gonzalez, C., Un. Puerto Rico '54, New Haven
°Good, P. S., Yale '45, Waterbury
°Good, R. C., Columbia '42, Waterbury
°Goodhue, P. A., Vermont '58, Stamford
Goodman, A. H., State Univ. N. Y. '57, New Haven
Goodman, D.B., Cornell '74, Woodbury
Goodman, D. T. H., Un. Santo Tomas '58, Meriden
Goodman, J. L., Ottawa '60, Meriden
Goodman, S. E., Cornell '53, Norwalk
°Goodrich, A., Indiana '41, Bridgeport
°Goodrich, I., Med. Coll. Georgia '64, New Haven
Goodrich, W. J., Albany '39, Vero Beach, Florida (Fairfield County)
Goodwin, R.C., Georgetown '76, South Windsor (Tolland Cty)
°Goodyer, A. V. N., Yale '42, New Haven
Gordon, B. D., Maryland '51, Westport
°Gordon, E., Vienna '35, Middletown
Gordon, G. L., Columbia '47, Stamford
Gordon, J. M., Upstate Med. Ctr. '67, Danbury
°Gordon, M. E., Yale '46, New Haven
Gordon, R. S., Columbia '46, New Haven
°Gordon, Y., Tufts '48, West Hartford
°Gorham, G. V., Michigan '30, Norwalk
Gorin, M., Rochester '60, Middletown
°Gorman, A. T., Albany '57, Hartford
Gorman, D. J., Georgetown '62, Hartford
°Gorun, G., Bucharest-Romania '48, Stamford
Goss, J. D., Jr., Southern California '49, Kent
Gossart, R. M., Univ. Louvain Belgium '60, Bridgeport
Gosselin, A. G., Tufts '53, Jewett City
°Gossling, H. R., Temple '47, Hartford
Gotay-Rodriguez, V. M., Un. Puerto Rico '71, Waterbury
Gott, P., Tulane '62, Lakeville
°Gottlieb, F. I., Johns Hopkins '62, New Haven
°Gottlieb, M. B., N. Y. U. '64, Meriden
°Gould, M. M., Tufts '31, Hartford
°Gourlie, H. W., Harvard '31, Thompsonville
Gouterman, I. H., S. U. N. Y. '71, New Haven
°Goyette, R. P., Georgetown '61, Putnam
Grace, T. W., Georgetown '63, Hartford
°Graf, T. M., Cambridge, England '70, Hartford
°Graffagnino, P. N., Tulane '51, West Hartford
Graham, A. J., Tufts '60, New Haven
°Graham, J. R., Pennsylvania '61, Stratford
Graham, R. A., Univ. Coll. Dublin '55, New London
°Gram, P. B., Rochester '52, Manchester
Granger, D. P., Univ. Pennsylvania '54, Bridgeport
Grann, V. R., N. Y. Med. Coll. '62, Stamford
Grant, J. M., Columbia '49, Bridgeport
°Grant, R. F., Albany '38, Cromwell
°Granville, N. B., State Univ. N. Y. '52, Windsor
Grauer, L. E., Yale '68, New Haven
°Gray, C. H., Stanford '48, Old Greenwich
°Gray, P. H., Columbia '62, Stamford
Gray, P., Tulane '37, Portland
°Graydon, R. J., II, Albany '62, Hartford
Grayer, D. I., Albert Einstein '64, Bridgeport
Grayson, D. R., New Jersey '63, Hartford
Graziano, A., Rome, Italy '49, New Haven
Greco, T.P., Georgetown Med. '72, Waterbury
Green, M.S., Chicago Med. Sch. '71, East Hampton
°Green, R. H., Johns Hopkins '38, Madison (Middlesex County)
°Greenaway, M. D., Fac. Med. U. Sydney, Australia'67, Killingworth
°Greenberg, A., Long Island '32, Old Saybrook
°Greenberg, A. D., Rochester '60, New Haven
°Greenberg, I. M., New York '55, Waterbury
Greenberg, R. D., Univ. of Michigan '67, Vernon (Hartford County)
°Greenblatt, H. J., Vermont '36, New Britain
Greenburg, J. L., Un. Illinois '66, Westport
°Greene, G. S., Harvard '39, Hartford
Greene, L. A., Boston '60, Norwich
Greenfield, M., N. Y. U. '50, Danbury
Greengold, J. B., St. Louis '73, Naugatuck
°Greenhouse, B., Yale '21, New Haven
°Greenspan, R. H., Syracuse '48, New Haven
Greenwald, W. F., Johns Hopkins '50, New Haven
°Greiner, G. F., Vanderbilt '40, Kent
°Grendon, D. A., Harvard '28, Sharon
°Gretsch, B. J., Pennsylvania '73, Newtown
°Grey, N. J., S. U. N. Y. '64, Hartford
°Griffin, J. C., Dublin '55, Norwich
°Griffin, W. M., St. Un. New York '62, Greenwich
Griffith, J. J., St. Un. New York-Downstate '52, Norwalk
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Grillo, W., Rochester '38, Willimantic
°Griswold, D. M., Boston '65, Willimantic
Griswold, E. M., Yale '32, Glastonbury
°Griswold, M., Yale '25, Old Lyme
°Griswold, M. T., Tufts '05, Torrington
Gritzmacher, R. O., Wisconsin '63, Old Saybrook
Grody, M. H., Pennsylvania '46, Hartford
Gromults, J. M., Jr., New York Univ. '58, Stamford
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Gross, D.A., Un. Florida '73, Orange
°Gross, E. M., N. Y. U. '59, Farmington
°Gross, N. D., Creighton '49, Hartford
Grossman, B. A., Georgetown '59, Norwalk
°Grossman, D. S., Un. Ghent '71, Manchester
Grossman, E. T., Albert Einstein '63, Fairfield
Grossman, J. H., Rochester '41, Bridgeport
Grossman, R. S., St. Louis '52, Newtown
Grubin, S., Royal Coll. P. & S. Scotland '36, Southbury
Grundy, G. W., Rochester '70, Orange
°Gruskay, F. L., Yale '54, Milford
°Gryboski, R. A., Yale '65, New Britain
Gryboski, W. A., Yale '56, New Britain
°Grycz, H. J., St. Andrews '59, Cheshire
°Gualtieri, M. V., Tufts '43, Waterbury
Guardino, J. J., Vermont '62, Manchester
°Gudernatch, G. S., Cornell '39, Sharon
°Guida, F. P., Yale '34, New Haven
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Gulash, J. R., Marquette '40, Bridgeport
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°Gura, G. M., Loyola '31, Southington
Gurwitt, A. R., Yale '57, New Haven
°Gurwitz, J., Tufts '38, Bloomfield
°Guss, L., Oklahoma '41, Norwich
Gustafson, W. E., Yale '49, East Hartford
°Gutierrez, T. G., Univ. Philippines '58, Meriden (Hartford County)
Gutkowski, T. J., Albany '64, South Windsor
°Guttenberg, I., Yale '60, Meriden
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Haber, M., N. Y. Med. '63, Rockville
°Haberlin C. E., Med. Coll. Va., '24, Stratford
°Habib, N. I., Univ. of Cairo '55, Derby
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Haddad, F. M., Yale '43, Ansonia
Haeseler, F. D., Downstate '71, Guilford
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Haight, B., State Univ. N. Y. '71, Vernon
Haine, J. W., Albany '43, Stamford
°Haines H. L., Johns Hopkins '39, New London
°Hajek, J. V., Harvard '65, Sharon
°Haksteen, J. J., Georgetown '58, Hartford
°Hale, S. D., Columbia '65, Willimantic
°Hale, V. A., Texas '22, Sarasota, Florida (New London County)
°Haley, J. C., Yale '40, Hamden
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Hall, M. I., Edinburgh '34, Bristol
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Hall, W.C., Pennsylvania '30, West Hartford
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°Hamaty, D., Hahnemann '53, Bridgeport
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°Hamilton, C. R., Jr., Jefferson '49, Manchester
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°Hamilton, T. S., Wayne '39, Avon
Hamlin, C. H., Harvard '41, Hartford
Hamlin, N. P., Harvard '72, Winsted
Hamm, E. V., Univ. of Louvain '70, Southbury
Hampton, W. H., Syracuse '54, Greenwich
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Handler, M.S., St. Un. N.Y. '71, Vernon
Handler, S. L., Louisville '51, New Haven
°Haney, J. F. B., Yale '64, Storrs (Windham County)
°Hankin, E., Columbia P. & S. '62, Fairfield
°Hanley, H. C., Toronto '63, Bridgeport
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°Happel, E., Washington Univ. '49, New Milford
°Hardenbergh, D. B., Harvard '34, Southport
°Hardy, J.H., Columbia '58, Hartford
°Hardy, R.E., Cornell '57, Greenwich
°Hare, E. T., Jr., Vermont '58, Milford
°Harkins, J. A., N. Y. Med. Coll. '52, Norwich
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°Harris, B. R., Yale '22, West Haven
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°Harris, H. P., J., Duke '36, Southport
°Harris, L. D., Tufts '34, Hartford
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°Harrison, S. L., Washington '30, Southbury
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Harshbarger, J. E., Pennsylvania '55, Bridgeport
°Hart, H. H., McGill '22, Southbury
°Hart, J. C., Yale '30, New Haven
°Hart, R. W., Cornell '45, Hamden
°Hart, W. E., Jefferson '49, Hartford
Hartman, F. B., Harvard '34, New London
Harton, M. R., Tufts '60, Danielson
°Harty, J. E., Georgetown '37, Waterbury
°Harvard, B. M., Jr., Tulane '39, New Haven
°Harvey, E. R. Jr., Yale '41, Seymour
°Harvey, R. B., Cornell '45, New Haven
°Harvey, S. W., Cornell '46, Middletown
°Harwin, S. M., New York '61, New Britain
°Harwood, C. W., Vermont '40, Middletown
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°Haskins, D. M., Harvard '47, Greenwich
Hassan, K. A., Alexandria '52, Corinth, Mississippi (Fairfield County)
°Hasson, J., St. Un. New York '51, Hartford
Hau, K. H., Wuhan '56, Bridgeport
Haugh, J. D., N. Y. U. '52, Hartford
Havlicek, J. A., Queen's '63, Middletown
Hawkes, P. H. R., St. Bartholomew's Hospital '49, New Britain
Hawkins, C. V., Loma Linda '70, Greenwich
Hawkins, H. B., Harvard '66, Hartford
°Haxo, J. V., Yale '51, New Milford
Haydock, G. G., Harvard '45, Sharon
°Hayes, D., Harvard '51, New London
°Hayes, J. R., Un. Coll. Cork '67, Willimantic
Hayes, M. A., Michigan '40, New Haven
°Hays, D. R., N. Y. U. '49, Washington
°Hazen, D. R., Harvard '33, Hartford
Healy, J. W., Tufts '55, Hartford
Healy, T. M., Columbia '41, Manchester
°Heap, L. D., St. George's Hosp. Med. Sch. '58, Southington
°Hebard, G. W., Cornell '36, New Canaan
°Hecht, H. L., Albert Einstein '62, Stamford
°Hecklau, E. F., N. Y. U. '54, Greenwich
°Hedberg, D. L., McGill '60, Hartford
Hedley, G. E., Heidelberg Un. '67, Norwalk
Heiger, A. A., Basel '59, Cheshire
°Heimann, W. G., Bern '56, Manchester
°Heinrich, W. D., Hahnemann '41, Torrington
Heinz, P.S., Univ. Pennsylvania '56, Guilford
Helfrick, F. W., Johns Hopkins '41, Manchester
Helfrick, S. M., Johns Hopkins '44, Manchester
°Heller, C. I., Columbia '68, Bridgeport
°Heller, S. F., Tufts '69, Groton
Heller, W., State Univ. N. Y. '60, Bridgeport
°Hellijas, C. S., Rochester '41, Wethersfield
Hellman, S., Syracuse '59, Boston, Mass. (New Haven County)
°Helvie, H. E., Oklahoma '60, Waterbury
Hemenway, C. G., Tufts '69, Fairfield
Hendessi, H., Tehran '56, Manchester
Henisz, A. K., Warsaw, Poland '60, Sharon
Henken, E. M., Tufts '52,West Hartford
°Henkle, R. T., Cornell '31, New London
Hennessey, B.C., Dalhousie Univ. '64, Bristol
°Hennessey, J. F., McGill '53, Meriden
Hennessey, J. G., Tufts '34, Bridgeport

Hennessy, J. J., Columbia '26, West Hartford
Henry, P. D., McGill '52, Derby (Fairfield County)
Henry, W. B., Albany '63, Glastonbury
*Hensley, R. V., Univ. Texas '62, West Hartford
*Hepburn, R. H., Harvard '39, Hartford
Herbert, E. A., Cornell '49, Willimantic
Herbin J. T., Zurich '66, Fairfield
Herbordt, W. A., Berlin '46, Woodbridge
Herbstman, M. S., N. Y. Med. Coll. '72, Westport
Herman, E. B., Berne '56, Norwalk
Herman, M., Univ. Dublin '39, Bridgeport
Herman, R. S., Jr., Buffalo '46, Manchester
Hermann, J. H., Copenhagen '59, Norwalk
*Hermele, H. I., Albert Einstein '69, Fairfield
Hernandez, J. R., Cordoba Un. '69, Ansonia
Hernandez-Trujillo, J.M., Zaragoza, Spain '75, Bridgeport
*Herr, H. H., Tufts '49, New Britain
*Herrmann, A. E., Harvard '23, Waterbury
*Hersey, T. F., Tufts '37, New Haven
Hersh, S. B., Chicago, Med. Sch. '69, Waterbury
Hershey, D. D., Albany '50, Bristol
Hershman, H. H., Western Ontario '41, Bristol
Herzig, S.A., Dalhousie Un. '74, Cos Cob
Herzlinger, R. A., New York Med. Coll. '69, Bridgeport
Herzog, A., Pennsylvania '67, Hartford
*Hess, O. W., Buffalo '31, North Haven
*Hetzel, J. L., Yale '26, Waterbury
Hewetson, J. B., Cork Medical '57, Putnam
Hewett, W. J., Un. Buffalo '61, Hartford
*Hewitt, J. K., Boston '69, Hartford
*Hickcox, C. B., Tufts '38, Hartford
Hickmon, N., Meharry '59, Hartford
Hickox, D. B., Albany '62, Middletown
*Hicks, J. E., Tennessee '66, New Haven
Hicks, R. E., Munich '59, New Britain
*Hiden, R. B., Virginia '23, New Canaan
*Higgins, D. C., State Univ. N. Y. '55, New Haven
*Higgins, H. W., Tufts '32, Norwich
Higgins, K. E., Rochester '58, Fairfield
Hild, D. H., Un. Pennsylvania '62, Hartford
Hill, D. A., Yale '65, Hartford
Hill, J. M., Illinois '53, West Hartford
Hill, P. R., Marquette '50, Bridgeport
*Hill, T. M., Maryland '66, Hartford
*Hill, W. E., Jr., Temple '52, Naugatuck
*Hillis, W., Cornell '55, Greenwich
*Himelstein, M., Columbia '51, Hartford
Himelstein, S. C., St. Un. New York '65, Enfield
*Himmelsbach, R. K., Georgetown '57, Simsbury
Hines, A. H., Un. Pennsylvania '69, Danbury
Hinz, C. F., Jr., Western Reserve 51, Farmington
Hirschfeld, O. M., Tufts '31, West Hartford
Hirschberg, M. S., Tufts '27, Bloomfield
Hobbie, R. J., Vermont '65, Fairfield
Hochberg, D. T., Johns Hopkins '62, Putnam
Hockman, H. J., UConn. '73, Farmington
Hockmuth, L. N., Tufts '42, West Simsbury
*Hoden, P. D., Univ. of Vermont '70, Waterbury
Hodgkins, C. H., Hahnemann '36, New Haven
Hofbauer, H. B., Penn '68, Wallingford
*Hoffer, J. M., Tufts '46, Ansonia
*Hoffman, H. B., Northwestern '61, New Haven (Hartford County)
*Hoffman, J. B., Columbia '43, Greenwich
Hoffman, L. I., Albert-Einstein '66, Bloomfield
*Hoffman, W. A., State Univ. '53, Fairfield
*Hogan, A. F., N. Y. Med. Coll. '49, Putnam
Hogan, G. F., Yale '57, New Haven
*Hogan, J. M., Univ. Coll. Dublin '56, Waterbury
*Holden, J., Long Island '47, Derby
*Holden, W. W., N. Y. U. '47, Bristol
*Hollander, J. S., St. Univ. New York '60, Enfield
*Hollander, M. E., Hahnemann '69, Meriden
Holley, M. R., Howard '61, New Haven
*Hollister, J. M., Cornell '58, Groton
Holtz, R. S., Vermont '28, West Hartford
Homer, D. R., Vermont '60, New Milford (Fairfield County)
Homza, L. R., Creighton '58, Bridgeport
Hong, C.R., Univ. Santo Tomas '70, Norwich (New Haven County)
Hook, R., Municipal Univ. Amsterdam '61, Hartford (New Haven County)
Hope-Ross, P. E., Nat'l. Ireland '53, Bridgeport
Horn, B., N. Y. U. '29, Bridgeport
*Hornblow, J. T., Albany '60, Hartford
*Horning, B. G., Harvard '28, Malaga, Spain (Hartford County)
*Horowitz, B. J., Pennsylvania '59, Hartford
Horowitz, I., Vienna '37, Bridgeport
Horowitz, J. L., N. Y. Med. Coll. '49, Bridgeport
Horrax, T. M., Temple '46, Farmington
Horrigan, T. H., N. Y. U. '49, Glastonbury
*Horton, F. H., Yale '47, Manchester
*Horton, W. H., Boston '40, Guilford
*Horwitz, M., Harvard '49, Manchester
Hosking, W. F., Queens Univ. '61, West Hartford
Hostnik, W. J., Johns Hopkins '54, New London
*Houck, J. H., Queens U. '49, Hartford
*Hough, P. T., McGill '32, Nova Scotia, Canada (Hartford County)
*Houle, R. T., Georgetown '32, South Windsor
*Houlihan, J. J., N. Y. Med. Coll. '46, West Hartford
*Houlihan, R. K., N. Y. Med. Coll. '54, New Haven
*Hourihane, M. J., Nat'l. U. Ireland '61, West Haven
Howard-Flanders, J.D., Royal Free Hosp., England '49, Branford
*Howard, L. K., Minnesota '29, Avon
*Howard, R. O., Virginia '61, New Britain
*Howard, W. O., N. Y. U. '32, Orange, New Jersey (New Haven County)
*Howe, E. R., Columbia '46, Hartford
Howe, G. O., Colorado '50, West Hartford
*Howorth, B. M., Washington '25, Greenwich
*Hubbard, R. C., Cincinnati '46, Danbury
*Huber, H. C., Temple '46, Waterbury
*Huckabee, W. E., Univ. Texas Southwestern '49, Greenwich
*Hughes, C. T., Jr., Harvard '53, Hartford
Hughes, G. S., Indiana '44, Darien
Hughes, J.S., Un. North Carolina '72, New Haven
Hughes, P.W., N.Y. Med Coll. '72, Stamford
*Hughes, W. F., Jefferson '48, Westport
Hukill, P.B., Yale '53, Torrington
Hulcher, W.G., Med. Coll. Virginia '73, Stratford
Hull, C., Queens '55, Hartford
Hulme, S. A., Pittsburgh '45, Hartford
*Humphrey, C. B., Temple Univ. '65, Hartford
Humphries, R. H., Columbia '64, New Canaan
*Hunkemeier, E., N. Y. U. '33, Rowayton
Hunt, K. J., Case Western Reserve '70, New Haven
Hunt, M. L., Tufts '51, Tolland
*Hurowitz, R. B., Basel '59, West Haven
*Hurst, V. W., III, Yale '62, Woodbury (New Haven County)
Hurwit, T. C., Tufts '57, Bloomfield
*Hurwitz, G. H., Maryland '33, Bloomfield
*Hurwitz, M. R., Albany '64, Hartford
*Hurwitz, S., Long Island '49, New Haven
Hurzeler, M. A., Creighton '60, New Haven
Huskins, D.G., Columbia '73, Norwalk
*Huss, G. R., Temple '49, Leonia, New Jersey (Fairfield County)
Husvet, F., Med. Sch, Univ. of Pecs. '51, Winsted
Huszar, T. G., Un. Budapest '63, Milford
*Huvelle, C. H., N. Y. U. '43, Torrington
*Hyland, F. J., Galway '54, Milford

°Hyland, J., Nat'l. Un. Ireland '55, Hamden
°Hyun, J., Seoul '52, Hartford
Iacovino, J. R., Tufts '67, Norwalk
Iannotti, J. P., Naples '38, Plainville
°Iannotti, S., Un. Naples '68, Ansonia
°Iger, H. G., State Univ. N. Y. '62, Hartford
°Igersheimer, W. W., Tufts '44, Guilford
Ignace, S. J., Georgetown '30, New Milford
°Ill, K. C., N. Y. Med. Coll. '54, Plainville
Ill, M. F., New York '55, Bristol
°Immordino, P. A., Columbia '62, New London
°Inder, H. A., McGill '51, Stratford
°Inkster, J. H., Cornell '30, Keene, New Hampshire
(Fairfield County)
°Innes, J. W., Cornell '60, Greenwich
°Iodice, M. T., Freiburg '64, Bridgeport
Ippolito, R. J., S. U. N. Y. '73, North Haven
°Ippolito, T. L., N. Y. Med. Coll. '38, East Norwalk
°Ireland, E. F., Jr., Harvard '48, Bridgeport
°Irving, W. D., New York Univ. '52, Old Saybrook
°Irwin, H. H., Tufts '34, Margate, Florida
(New London County)
°Irwin, J. B., Long Island '48, Torrington
Isay, R. A., Rochester '61, New Haven
Israel, D., Christian Med. Coll. India '63, Danielson
°Izard, M. W., Physicians & Surgeons '59, Hartford
°Izumi, E. M., Texas '50, Winsted
°Izzo, P. A., Vermont '46, Stamford
Jack, J. L., Yale '23, North Haven
Jackson, S. W., McGill '50, New Haven
Jacobs, H.E., UConn '74, West Hartford
°Jacobson, C. E., Jr., Cornell '35, Manchester
°Jacobson, H., Lausanne '62, New Haven
°Jacobson, J. J., Iowa '63, New Britain
°Jacuch, M., Ukraine '55, Hartford
°Jaeger, C. A., Duke '50, Greenwich (New Haven County)
Jaiven, S. J., N. Y. U. '40, Stamford
°James, L. P., Yale '27, Hartford
°James, W. R., Yale '44, Essex
Jameson, M. E., Edinburgh '52, Danbury
Jameson, T. P., Edinburgh '52, Danbury
°Jamharian, J., Un. Istanbul '53, Southington
Jamil, Q. A., Dacca Med. Coll. '68, Middletown
Jamshidi, A., Teheran '54, Bridgeport
Janet, S. J., Zurich '56, Milford
Jankowich, R. E., Harvard '55, Stratford
January, D. A., Yale '34, West Hartford
°January, M. H., Yale '35, West Hartford
°Janzen, A. H., Kansas '38, Hartford
°Jarvis, P.A., Cornell '70, South Windsor
°Jarvis, P.R., N.Y.U. '70, Bloomfield
Jee, K. S., Seoul Nat'l. '62, Norwalk
Jegathesan, K., Univ. Ceylon '66, Waterbury
°Jennes, M. L., Tufts '38, Southbury
°Jennings, W. F., Rush '37, Groton (Hartford County)
°Jensen, G. O. F., New York '57, Bristol
°Jensen, P. B., London Univ. '52, Sharon
Jenusaitis, J. R., Tufts '47, Waterbury
Jeresaty, R. M., Beirut '54, Hartford
Jerrett, S. A., Un. Missouri '72, Norwalk
Jeshuran, W. R., Ceylon '66, Meriden
Jilani, G., Dow Med. Coll. '59, Watertown
(New Haven County)
°Job, G. G., Univ. Philippines '59, West Haven
°Johnson, C. W., Boston '45, Thompsonville
Johnson, D. E., Indiana Un. '72, Rockville
°Johnson, D. P., Yale '64, Middletown
°Johnson, D. W., Columbia '48, Hartford
Johnson, G. B., Jr., Boston '55, Bridgeport
°Johnson, H. K., Jr., Jefferson '58, New London
°Johnson, J. C. Jr., Vanderbilt '44, Niantic (Hartford County)
°Johnson, K. T., N. J. Coll. Med. '71, New Britain
°Johnson, M. E., Wom. Med. Coll. Penn. '57, New London
Johnson, P., Tufts '32, Hartford
°Johnson, S. A., Columbia '49, New Britain
°Johnson, T. H., Columbia '59, New Britain
°Johnson, V.B., Yale '65, Guilford (Middlesex County)
Johnson, W. H. N., Howard '39, Norwalk
°Johnston, J. H., Long Island College '43, Wethersfield
Johnston, J. J., Duke '67, Simsbury
Jokl, P., Yale '68, New Haven
Jonas, G. Q., N. Y. U. '50, Fairfield
Jonas, S. L., Un. Michigan '50, Wilton
Jones, C. R., New York Med. Coll. '62, Hamden
°Jones, E. E., Med. Coll. Virginia '52, Farmington
°Jones, E. K., Columbia '34, Fairfield
Jones, J. F., Columbia '43, Danielson
°Jones, M. B., N. Y. U. '41, Norwalk
Jones, R. F. III, Virginia '61, Hartford
°Jones, W. D., III, Jefferson '66, Hartford
Jones, W. N., Rochester '50, New London
Jordan, L.T., Medical Coll. Georgia '71, New Haven
°Jordan, R. H., Virginia '33, New Haven
°Josel, M., Chicago '52, West Hartford
°Joseph, J. L., Port-au-Prince '54, Norwich
°Joseph, L. G., Jefferson '39, New Haven
Josephson, N. D., Yale '45, Rockville
Josephson, R. P., S. U. N. Y. '67, Simsbury
°Joslin, S. L., Yale '43, Fairfield
°Jovell, J. W., Tufts '39, Danbury
Joy, R. C., McGill '51, Danbury
Jung, R. M., Tufts '62, New London
Jutkowitz, D.M., N.Y. Med. Coll. '73, Stratford
°Kadish, J. A., Queen's '60, Norwich
°Kadish, M. E., Geneva '55, Norwich
Kaess, K. R., Harvard '44, Winsted
°Kahaner, H. A., Tufts '63, Manchester
Kahan, R.S., Cornell Un. '71, Norwalk
°Kahn, C.S., Harvard '58, New Britain
°Kahn, D., State Univ. N.Y. '53, Meriden
Kalaman, F.J., Georgetown '41, Norwalk
°Kalams, Z.S., Athens '53, Norwich
Kalayjian, D.B., Univ. Chicago '67, Middletown
°Kalett, J., Jefferson '28, Sarasota, Florida (Hartford County)
Kallfelz, A., New York '55, Hartford
°Kallick, C. J., Jefferson '58, Westport
°Kamens, E. A., Vermont '51, Fairfield
°Kaminsky, D. M., N. Y. U. '63, Orange
Kamm, H. J., S. U. N. Y. Upstate '73, New Milford
°Kanter, D. M., Long Island Coll. of Med. '49, Stamford
°Kantharaj, A. J., Christain Med. College '56, Norwich
°Kaplan, B. J., Vermont '49, Hartford
°Kaplan, D. H., N. Y. Med. '55, New London
Kaplan, H., N. Y. Med. Coll. '44, New Britain
Kaplan, H. P., Yale '63, Meriden
°Kaplan, J. R., New York '68, Southington
°Kaplan, L., Baylor '36, Bridgeport
°Kaplowe, J. L., N. Y. Med. Coll. '30, New Haven
Karas, L. M., Tufts '57, Stamford
°Kardos, J. A., Jefferson '51, Stamford
°Karlovsky, E. D., Albany '46, Orange
Karmarkar, D.D., Armed Forces Med. College-India
'71, Winslow, Arizona (Windham County)
Karno, M. L., Tufts '55, New London
°Karns, R. E., Jefferson '50, Manchester
Karpe, R., Prague '24, Hartford
°Karsh, J. A., Beirut '46, Waterbury
°Kaschmann, J., Munich '22, West Hartford
Kashgarian, M., Yale '58, New Haven
°Kasper, R. F., Georgetown '58, Bridgeport
Kates, R. J., Columbia '70, Hartford
Katis, J. G., McGill Un. '60, New Canaan
Katis, L. U., McGill '57, Ridgefield
°Katz, A. J., Pennsylvania '62, Farmington
°Katz, D., Vermont '25, Laguna Hills, California
(Hartford County)

*Katz, H., Harvard '21, Hartford
*Katz, I., N. Y. Med. Coll. '37, Meriden
Katz, J., Harvard '49, New Haven
Katz, M. E., Oklahoma '41, Norwich
Katz, M.E., Univ. Pennsylvania '72, New Haven
Katz, R. M., Upstate Med. Ctr., '68, Derby
Katz, S. R., N. Y. U. '64, Fairfield
*Katzin, B., Johns Hopkins '43, Torrington
Kauders, J. T., Jefferson '62, Bridgeport
*Kauer, G. L., Jr., Cornell '37, Greenwich
Kaufman, R.E., Yale '71, Branford
*Kaufman, W., Michigan '38, Stratford
*Kaufmann, H. A., Michigan '54, Middletown
Kaunitz, P. E., N. Y. U. '38, Westport
*Kavirajan, V., Madras, India '66, New Milford
*Kavookjian, H. Jr., Beirut '50, Darien
*Kawecki, W., National Univ. '55, New Britain
Kay, C. J., S. U. N. Y. '60, Bridgeport
*Kay, F., Boston '58, Hamden
*Kay, R., Temple '45, Hartford
*Kayal, F. A., New Jersey Coll. Med. '69, Brookfield
Kaye, D. E., Tufts '70, Bristol
Kaye, R. H., Johns Hopkins '65, Norwalk
Kaye, S. J., Un. Pittsburgh '69, Bristol
*Kazanjian, N. A., Hahnemann '45, New Haven
*Kazarian, K.K., N.Y. Med. Coll. '61, Stamford
Keating, S. J. Jr., Georgetown '62, Simsbury
*Keddy, R. A., McGill '24, Pompano Beach, Florida (Fairfield County)
Keefe, A. D., N. Y. Med. Coll. '52, East Hartford
Keefe, R. B., Maryland '54, Windsor
Keefe, R. S., Boston '25, Wethersfield
*Keefe, W. P., Maryland '55, Hartford
Keegan, J. T., Maryland '55, Milford
*Keeney, R. R., Jr., Tufts '34, Manchester
*Keet, J. E., Long Island '47, Waterbury
*Keggi, K. J., Yale '59, Waterbury
Keleman, E., Budapest '25, Montebello, Calif. (Fairfield County)
Kellan, C., Cluj '57, Wallingford
*Kelleher, J. H., Vermont '42, Norwich
Kelleher, M. J., N. Y. Med. Coll. '60, Bridgeport
Keller, B. R., S. U. N. Y. '65, Danbury
*Keller, F., Long Island '43, Woodbridge
Keller, L., Tufts '26, Stamford
*Keller, N. W., Cornell '54, Greenwich
Kelley, P.A., Loyola-Stritch '73, New Britain
*Kelley, W. O., Johns Hopkins '37, Norwich
*Kellsey, D. C., Boston Univ. '47, Hartford
*Kelly, C. C., Johns Hopkins '14, Hartford
*Kelly, D. R., Albany '64, Hartford
Kelly, G.P., New York Un. '69, Fairfield
Kelly, J. C., Queen's '28, Riverside
*Kelly, J. F., Tufts '50, Middletown
*Kelly, M. D., Tufts '50, Middletown
*Kemler, R. L., Yale '43, Hartford
Kemp, E. P. Tufts '25, Fairfield
*Kemp, W. W., Harvard '39, Stamford
Kenigsberg, N., Yale '39, Fairfield
Kennealey, G.T., Yale '70, Waterbury
*Kennedy, G. L., Tufts '50, Jewett City (Windham County)
*Kennedy, J. J., Jr., Boston '46, Windsor Locks
*Kenney, J. D., Boston '56, New Haven
Kenny, W. J., Dublin '60, West Hartford
*Kent, E. H., N. Y. U. '43, Greenwich
*Kenter, A. M., Ankara '51, Danbury
*Keogh, R. J., Georgetown '57, Stratford
Kerin, R., Yale '47, Milford
*Kerin, W., St. Louis Coll. P & S '71, New Haven
*Kerr, R. J. N., Trinity Coll. Dublin '56, Clinton
Kerrigan, R., New York '62, Norwich
Kertesz, J., Vienna '24, Hamden
*Kessel, L., Vienna '34, Wethersfield
*Kessler, F., Vienna '37, New Haven
*Kessler, W., Rochester '58, Westport
Keszler, K., Un. Louvain '67, Madison
*Keys, R. C., Kansas '27, Winchester, Kansas (Fairfield County)
*Khachane, V. B., Calcutta Nat'l. Med. '63, New Haven
Khan, K., King Edward Med. Coll. '50, New Britain
*Kharma, K.K., Amer. Un. Beirut '65, Waterbury
Khoury, A. E., Georgetown '60, Danielson
Khu, E. G., Sto. Tomas '63, New Haven
*Kiley, R. F., Yale '53, Hartford
*Kiley, R. J., Virginia '66, Waterbury
*Kilga, L. A., Un. Heidelberg '66, Higganum
*Kilgus, J. F., Maryland '31 Avon (Litchfield County)
Kilhenny, C., N. Y. Med. '57, Danbury
*Kim, C. A., Kyungpook Un. Korea '58, New London
Kim, C. C. S., Seoul Nat'l. Un. '60, New Haven
Kim, C. K., Boston '63, Manchester
*Kim, I. K., Seoul Nat'l. Un. '67, Meriden
*Kim, K., Seoul '52, New Haven
*Kim, K. S. C., Korea Univ. '64, Easton
*Kim, P., Nat'l. Taiwan Un. '65, Stamford
*Kim, Y. H., Seoul Nat'l. Un. '61, Easton
*King, R. P., N. Y. Med. Coll. '57, New Haven
*King, S. A., Columbia '47, Stamford
Kingsley, S. W., Tulane, '70, Danbury
*Kingston, P. J., N. Y. Med. Coll. '50, Hartford
*Kinstlinger, R., Rochester '60, West Haven
Kirchner, J. A., Virginia '40, New Haven
Kirkland, J.W., Jr., Albany Med Coll. '73, Stratford
Kirkpatrick, J. R., Baylor '69, Hartford (Windham County)
Kirsch, N., Long Island '40, West Hartford
Kish, L. H., Rochester '64, Bristol
Kiss, G. T., Cornell '51, Fairfield
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*Klare, R. E., Columbia '53, East Woodstock
*Klatskin, G., Cornell '33, New Haven
*Klatsky, A. U., George Washington '59, Hartford
Klauber, G. T., Guy's Hospital, London '63, Newington
*Kleeman, J. A., Yale '46, Bethany
Klein, B., N. Y. Med. Coll. '52, South Meriden
*Klein, H. T., Illinois '40, Stamford
*Klein, J., Long Island '34, West Hartford
Klein, J. J., St. Univ. New York '57, Norwalk
Klein, N. C., Cornell '60, Stamford
Kleinman, H. L., Buffalo '41, Bridgeport
*Klenoff, B. H., Tufts '69, Stamford
*Kligerman, S., Illinois '39, Hartford
Kligfeld, M., Albert Einstein '67, Derby
*Klimas, F. A., Vermont '54, Fairfield
*Klimek, R. J., S. U. N. Y. '66, New London
Klinger, S. Y., Indiana '54, Woodbury (New Haven County)
*Klipstein, A., N. Y. U. '65, Manchester
*Klipstein, E. A., N. Y. U. '65, Manchester
*Klumpp, T. G., Harvard '28, New York City (New Haven County)
*Knauff, E. F., New York '54, Fairfield
Knauft, R. F., Case Western Reserve '69, Hartford
*Kneale, H. B., Johns Hopkins '20, Fairfield
*Knight, H. F., Rochester '49, Hartford
*Knights, W., Vermont '60, East Hartford
*Knirsch, A. K., Western Ontario '62, Groton
Knobelman, R. A., Pennsylvania '71, New Haven
*Knowlton, A. H., Albany '66, New Haven
*Knox, A. E. H., Nebraska '47, Bloomfield
*Knox, K. R., Jefferson '46, Hartford
*Koch, L. W., New York '63, New Britain
*Koehler, P. B., Yale '48, Trumbull
*Koenig, A. R., North Carolina '58, Cos Cob
Koenigsberg, D. N., Albert Einstein '66, New Haven
*Koff, A. M., Columbia '57, Avon
*Koff, M. S., Hahnemann '63, Hartford

°Koffler, A., Jefferson '34, Stamford
°Kogut, H. V., N. Y. Med. Coll. '43, Bridgeport
°Koleshko, L. J., Maryland '42, Waterbury
°Kondo, K., Keio, Un. Tokyo '63, Woodbridge
Koneswaran, M., Univ. Ceylon '66, Shelton (New Haven County)
Koneswaran, S., Univ. Ceylon '69, Shelton (New Haven County)
°Koops, H. J., Harvard '66, New Britain
Kopeloff, N., Albert Einstein '66, New Britain
Korab, J. J., Tufts '43, Higganum
°Korn, F. E., N. Y. Med. Coll. '50, Middletown
°Kosar, W. P., Columbia '46, Hartford
Kostecki, R. J., N. Y. U. '61, Waterbury
Kosto, B., Yale '62, Hartford
Kotch, A., Vermont '64, Danbury
°Kotch, P. I., Tufts '60, Newtown
°Kott, J. H., N. Y. U. '33, Harwinton
°Koufman, W. B., Tufts '35, New Haven
°Kra, S. J., Lausanne '60, New Haven
°Krall, I. H., Long Island '37, Hartford
Kramer, B., Maryland '56, Wallingford
Kramer, F. M., Lausanne '54, Cheshire
Kramer, R. A., Yale '55, Newington
°Kramer, R. T., Wayne '56, Torrington
°Kramer, T., N. Y. Med. Coll. '62, Norwalk
°Kramm, W. A., Albany '51, Niantic
°Krasnogor, L. J., N. Y. U. '63, Stamford
°Krassner, L. S., Boston '56, New Haven
Kraus, M.L., Univ. Rome '74, Waterbury
°Kraus, P. A., Dartmouth & McGill '66, Waterbury
°Kraut, H. L., Harvard '53, Stamford
Krauthamer, M. J., St. Univ. New York '62, Darien
Krc, E. Czechoslovakia '52, Wallingford
Kreis, D. J., Tufts '47, New Haven
Kremenitzer, M.W., Downstate Med. Ctr. '69, Danbury
°Kremer, C. P., Jr., Virginia '53, Darien
Krenicky, P. T., Hahnemann '67, East Hartford
°Kresge, D. J., Temple '53, Collinsville
°Krieger, J. L., Long Island '49, Hartford
°Krieger, P. D., S. U. N. Y. Downstate '68, Greenwich
Krinsky, C. M., Tufts '33, New London
Kristan, J. J., Johns Hopkins '45, Rockville
Kriz, J. J. Virginia '61, Rockville
°Krizek, T.J., Marquette '57, New York (New Haven County)
°Krochmal, H., Vienna '37, Meriden
Kron, E. S., Downstate Med. Ctr. '70, Hartford
Kron, S. S., S. U. N. Y. Downstate '69, New Britain
°Kropp, P. J., Cologne '48, Norwich
°Krosnick, G., Jefferson '38, New Haven
°Krosnick, M. Y. Yale '30, New Haven
Krumperman, L.W., Jr., Temple Univ. '71, Hartford
Krupp, A. F., N. Y. Med. Coll. '62, Manchester
°Kuczko, E. P., N. Y. U. '52, Danbury
Kueffner, W. R., Minnesota '43, Southport
Kuehn, P. G., Rochester '52, Hartford
°Kugelman, T. P., Yale '60, Hartford
Kuhn, H. R., Texas '52, New London
°Kummer, A. J., Harvard '39, New Haven
°Kummer, S. I., Hahnemann '49, Rockville
Kundrat, G.J., Ohio State '73, Old Lyme
Kunkel, M. H., St. Louis Univ. '73, Trumbull
°Kunkel, P., Washington '34, Danbury (New Haven County)
Kurien, V. A., Edinburgh, Scotland '63, Manchester
Kurland, M. D., Harvard '60, West Hartford
Kuru, R. L., Un. Ceylon '68, Manchester
°Kushlan, S. D., Yale '35, New Haven
°Kutcher-Henchel, J., Women's Med. '69, New Haven
°Kwass, W., New York '66, New Haven
Kwee, H. S., Surabaya, Indonesia '65, New London
Laakso, W. B., Tufts '61, Hartford
°La Bella, L. O., Columbia '25, Middletown
Labraico, J. M., Jefferson '58, Bristol
LaBrecque, F. C., Tufts '35, Waterbury
°Labriola, G., Jefferson '57, Naugatuck
LaCamera, R. G., Cincinnati '49, New Haven
°Lacava, J. J., Georgetown '34, New Britain
Lach, F. E., Maryland '41, New Haven
LaCorte, S., N. Y. Med. Coll. '30, Stamford
°LaFemina, N. F., Long Island '25, Hamden
°Laffaye, H. A., Buenos Aires '61, Westport
°LaForte, P., N. Y. U. '50, Stamford
LaFrenier, R.K. Jr., Wisconsin '74, Hartford
°LaGratta, R. J., S. U. N. Y. '67, Danbury
Lahey, W. J., Harvard '42, Hartford
Lahiri, B., Univ. Calcutta '60, Hartford
Lahman, J. E., Med. Coll. Georgia '70, Rockville
Lahvis, W. F., St. Univ. N. Y. '56, New Milford
Laken, P. C., Colorado '64, New Britain
°LaMastra, P. M., Maryland '60, Bridgeport
Lamb, E. S., Yale '55, West Hartford (New London County)
Lambe, M. J., Queen Univ. Belfast '63, Hartford (Middlesex County)
Lambe, T. P. Queens Univ. '61, Middletown
Landau, S. J., Yale '55, New Haven
Lande, S., Yale '74, New Haven
Landesman, R. H., Vermont '66, Stamford
Landow, S. S., Un. Heidelberg '66, Branford (Middlesex County)
°Landry, A. B., Jr., Jefferson '56, Hartford
°Landwirth, J., S. U. N. Y. '61, Bridgeport
Landy, G., Case Western '63, Cheshire
°Langan, M. J., Columbia '46, Greenwich
Langenauer, B. J., Albert Einstein '64, Hamden
°Langhammer, H., Heidelberg '55, Norwich
°Langmann, R. D., Physicians & Surgeons '55, Hartford
°Langner, H. P., Yale '22, Milford
Langner, J. M., Un. Zurich '53, Southington (New Haven County)
Langou, R. A., Cordoba Univ. '65, North Haven
Laning, G. M., Michigan '10, Sharon
Lanzi, R. A., Temple '61, Orange
Lapenta, R. G., George Washington '37, Hartford
°LaPierre, A. R., Columbia '38, Norwich
°LaPierre, W. W., Columbia '39, Norwich
Lapinski, L. S. Yale '50, Bridgeport
°Laplume, A. A., Montreal '24, Tamarac, Ft. Lauderdale, Florida (Hartford County)
°LaPorte, T. F. V., Boston '33, Bristol
°Larkin, C. L., Jr., Columbia '46, Waterbury
°Larkin, J. C., Johns Hopkins '35, New Britain
°Larkin, J. I., Albany '57, Greenwich
°Larkin, J. T., Georgetown '30, Hampton
°Larson, A. L., Albany '36, Avon
°Larson, J. A., Northwestern Un. '53, Norwalk
Lashgari, M., Tehran '62, Hartford
Lassman, M. N., Rochester '68, Hartford
Lattanzi, W. E., Yale '55, New Haven
°Laubstein, M. B., S. U. N. Y. '56, Ansonia
Laudano, A. J., Tufts '47, New Haven
Lavietes, P. H., Yale '30, New Haven
°Lavietes, S. R., Baylor '49, New Haven
Lavin, W., Georgetown '71, New Haven
°Lavorgna, M. H., St. Louis '40, New Haven
°Lawlor, E. F., N. Y. Med. Coll. '59, Burlington
°Lawrence, G. J., New York Med. Coll. '63, Willimantic
Lawrence, J. J., Howard '57, Bridgeport
°Lawson, I. R., Aberdeen Un., Scotland '54, Danbury
Lawson, J. P., Manchester, England '55, Derby
Lazarus, B. A., Univ. Maryland '68, Bloomfield
Lazor, M. Z., Columbia P & S '57, Hartford
Leach, C. N. Jr., Columbia '60, Farmington
°Lear, H. A., St. Louis '43, New York, New York (Hartford County)
Leavy, S. A., Rochester '40, New Haven
°Lebhar, N. F., Columbia '39, Westport

Lebowitz, A. I., Hahnemann '66, Stamford
Lebowitz, W. B., Boston '56, Bridgeport
Lebson, R. E., Albert Einstein '64, New Haven
Lee, H. J., Yonsei, Korea '64, Bridgeport
°Lee, J. F., Cornell '46, Greenwich
°Lee, J. P., Nat'l. Defense Med. Ctr. '64, Middletown
°Lee, J. R., Queen's '24, Southbury
°Lee, K., National Defense Med. Ctr., China '64, Waterbury
Lee, K. J., Columbia '65, New Haven
Lee, M. A., Louisville '66, Fairfield
°Lee, N. H., Seoul Nat'l. Univ. '49, Bridgeport
Lee, S., Yonsei, Korea '63, Willimanti
Lee, W., Yale '41, Hartford
°Lee, W. B., Yonsei Un. '60, Norwich
Lee, W. K., Un. Hong Kong '67, East Hartford
Lee, Y.S.C., Yonsei Univ. '64, Norwich
°Leeds, W. G., Long Island College '48, West Hartford
°Lefkowitz, L.A., S.U.N.Y. Downstate '64, Norwalk
Lefkowitz, M., Boston Univ. '61, Stamford
Lefkowitz, S., Lausanne '54, Waterbury
°Lehman, R. M., N. Y. U. '71, Waterbury
°Lehmann, W. B., Yale '63, Hartford
Lehmann, W. X., N. Y. Med. Coll. '43, Wilton
°Lehmus, H. J., N. Y. U. '43, Manchester
°Lehrman, J. C., Albert Einstein '66, Middletown
°Leib, D. B., Yale '55, New London
Lieb, G. M. P., Yale '55, New London
°Leicach, J., Buenos Aires '56, Kensington
Leicach, M., Buenos Aires '53, Hartford
°Leighton, R. L., N. Y. Med. Coll. '60, Fairfield
°Lena, H. F., Jr., Cornell '45, New London
°Lena, R. P., Tufts '57, New Haven
°Lenci, T. D., Columbia '49, Fairfield
Lencz, E., Vienna '36, Miami Beach, Florida (New Haven County)
°Lenehan, J. R., Jefferson '37, West Hartford
°Lenkowski, W. J., N. Y. U. '37, Waterbury
°Leone, P. V., N. Y. Med. Coll. '50, Bridgeport
°Leong, M.L.Y., Med. Coll. Pennsylvania '59, Ridgefield
°Leonhardt, C. G., Albany '53, Hartford
Lepow, I. H., Western Reserve '58, Farmington
Lepow, M. L., Western Reserve '52, Farmington
Lerner, A. B., Minnesota '45, New Haven
Lerner, M. R., Western Reserve '50, New Haven
LeRoy, J. B., Yale '50, Wellfleet, Mass. (Windham County)
Lesko, J. M., Duke '38, Bridgeport
°Lesnik, T. H., Albany Med. Coll. '67, Norwich
Lesser, R. L., Cornell '67, Waterbury
Lessow, R. J., Tufts '68, Hartford
Levenstein, M., N. Y. U. '58, Hamden
°Levieff, L., Lausanne '50, Stratford
Levin, A. E., Tufts '30, Hartford
°Levin, H. A., Univ. & Bellevue '18, New Haven
°Levin, L., Middlesex Hosp. Med. Sch. '65, Meriden
Levine, A. I., N. Y. U. '35, Rowayton
°Levine, H., Harvard '41, New Britain
°Levine, H., N. Y. U. '46, Middletown
°Levine, H. P., Vermont '50, Stamford
°Levine, I. R., Tufts '62, New Haven
Levine, J., Vermont '50, Stamford
Levine, M., Ghent, Belgium '60, Bloomfield
Levine, R. A. S. U. N. Y. '62, Norwalk
Levine, R. A., S. U. N. Y. '66, Branford
°Levinsky, M., Maryland '28, Bridgeport
Levinson, S. A., Jefferson '65, Fairfield
°Levinson, S. R., John Hopkins '71, Fairfield
°Levis, A. J., Zurich '63, Hamden
°Levreault, G. V., Tufts '42, Hartford
°Levy, A., Tufts '31, Winsted
Levy, A. L., Albert Einstein '66, New Haven
Levy, B. Seton Hall '60, Hartford
°Levy, H. D., Boston '59, Branford
Levy, L. L., Temple '46, New Haven
°Levy, M. N., Tufts '23, Bay Harbor Islands, Florida (Fairfield County)
°Levy, N., Yale '27, Branford
°Levy, R. M., Tulane '56, Derby
°Levy, S. H., Tufts '35, Stratford
Levy, T. S., Med. Coll. of S. C. '48, Bridgeport
°Lewicki, E. S., Georgetown '35, Waterbury
Lewin, M. L., Albert Einstein '61, Bridgeport
Lewis, D. O., Yale '63, New Haven
°Lewis, G. L., Yale '45, Simsbury
°Lewis, H. D., Harvard '42, New Haven
Lewis, M., Guy's Hospital '50, New Haven
Lewis, S. D., George Washington '31, West Palm Beach, Florida (Hartford County)
Lewis, S. H.; Albert Einstein '64, Old Greenwich
Lewis, W. S., N. Y. U. '62, Westport
°L'Heureux, J. A., Boston '34, Meriden
°Liao, S. J., Hsiang Ya '42, Middlebury
Licciardello, A. T., Harvard '47, Stratford
Licht, P.D., Un. Lausanne, Switzerland '74, Danbury
°Licht, S., N. Y. U. '31, Coral Cables, Florida (New Haven County)
Lichtenstein, E. S., Albert Einstein '68, Greenwich
°Lichtman, A., Zurich '54, Westport
Lidz, R. W., Basel '35, Woodbridge
Lidz, T., Columbia '36, New Haven
Lieb, J., Witwatersrand Univ. '67, New Haven
Lieberman, G., Albert Einstein '61, Westport
Lieberson, A. D., Yale '62, Westport
Liebowitz, M., Louvain '66, West Haven
°Liebowitz, S. A., Un Basle '65, Bloomfield
Light, C. F., Hahnemann '57, Monroe
°Lightbody, F. E. H., Edinburgh '51, Greenwich
Lillian, M., Georgetown '44, New Haven
Lilly, R.B., Jr., Univ. Vermont '71, Hartford
°Lin, P. T. C., Aurora '45, Ansonia
°Linburg, R. M., Yale '64, Hartford
Lindenberg, L. B., Upstate Med. Ctr. '65, Hartford
Lindenmuth, W. W., Jefferson '38, New Haven
°Linder, J. H., Columbia '27, West Cornwall
Lindquist, C. W., Johns Hopkins '70, Willimantic
°Lindskog, G. E., Harvard '28, Branford
Link, R. J., New Jersey '67, Bridgeport
°Linnolt, E., Royal Charles, Stockholm '51, Hartford
Lion, D. J., State Univ. N. Y. '55, Hamden
Lipkoff, C. J., N. Y. U. '36, Milford
Lippman, K. J., Cornell '66, Westport
°Lippman, L., New York Un. '67, Hartford
°Lipton, H., St. Louis '32, West Hartford
Lirot, S. L., McGill '32, Meriden
°Lischner, M. D., Yale '30, Hartford
Lisi, K. R., St. Louis '64, Bridgeport
Lisi, R. J., Georgetown '61, Norwalk
Liss, J. P., N. Y. Med. Coll. '62, Hartford
Litter, L., Basel '36, Hartford
°Little, D. M., Jr., Harvard '44, Hartford
°Little, M. H., Harvard '35, Willimantic
°Little, O. A. G., Boston '35, Willimantic
Littman, E., Chicago '61, Norwalk
°Livingston, R., Vermont '60, West Hartford
°Livingston, W. T., Pennsylvania '43, New Britain
°LiVolsi, V. A., Columbia Coll. P & S '69, New Haven
Livstone, E. M., Yale '69, New Haven
°Lloyd, D. S., Duke '71, Hartford
Lo, C. B., Darien Med. Coll. '56, Norwalk
Lobb, R. A., Hahnemann '37, Deep River
°Lobdell, D. H., Michigan '56, Bridgeport
°Lockhart, R. H., Yale '28, Fairfield
°Lockward, H. J., Western Reserve '43, Manchester
°Lockwood, J., Johns Hopkins '30, New Preston (Fairfield County)
Loeser, L. K., Western Reserve '52, Storrs
Loewald, E. L., Johns Hopkins '48, Hamden

Loewald H. W., Rome '34, New Haven
*Loewenberg, P. C., Berlin '39, East Hartford
Logan, W. J., Yale '25, New Haven
Loh, H. C., Tung-Teh '50, West Haven
Lohman, W. H., Cornell '45, Glastonbury
*Lohrmann, W., Rochester '43, Meriden
*Loiacono, R. A., N. Y. Med. Coll. '43, New London
Loke, J.S.O., Un. of The East (Philippines) '67 New Haven
*Lojko, A. T., Creighton '69, Putnam
Long, D. S., West Va. Univ. '69, Gales Ferry
Longo, A. D., Georgetown '38, Portland
*Longo, V. J., Yale '46, New London
*Longstreth, G., Columbia '65, Sharon
*Lopatin, C., Louisville '41, Bridgeport
*Lopez, R. E., Havana '49, Kensington
*LoPresti, D. A., Long Island '47, Hartford
Lord, B. J., Jr., Cornell '43, Norwich
*Losito, A. I., St. Louis '38, Port St. Lucie, Florida
(Fairfield County)
*Lovallo, F., Tufts '44, Sharon
Lovanio, R. G., N. J. Coll. Med. '66, Bridgeport
Lovegrove, R. H., Michigan '59, Stamford
*Lovekin, L. G., Wayne '43, Norwalk
Loveless, M. H., Stanford '24, Westport
*LoVetere, A. A., George Washington '35, Sunnyvale, Calif.
(Hartford County)
*Low, H. B. C., St. Johns University '50, Hartford
Lowell, D. M., Cornell Univ. '58, Waterbury
Lowry, E. C., Cornell '35, Guilford
*Loyer, R. E., Wayne St. '65, Waterbury
Lubchansky, J. H., N. Y. U. '33, New London
*Lublin, R., Johns Hopkins '29, East Hartford
Luby, M. J., N. Y. U. '53, Hartford
Lucas, J. J., Rome '57, Hartford
Luchansky, E. M., New Jersey '67, Fairfield
Luchs, D., McGill '50, Colebrook
Lucia, W., Bologna, Italy '63, Bridgeport
Luciano, M. C., Pennsylvania '44, Bridgeport
Luck, L. E., Albert Einstein '72, Westport
*Lujic, P., Zagreb, Yugoslavia '60, New Haven
Lund, D. A., Harvard '61, New Britain
Lundberg, E. A., Vermont '40, Stamford
*Lundberg, G. A. F., Jefferson '19, Manchester
*Lundberg, G. A. F., Jr., Jefferson '53, Manchester
Lundberg, W. B., Columbia Un. '70, New Haven
Lundborg, C. B., N. Y. Med. Coll. '67, Milford
*Luria, S., Western Ontario '38, Hollywood, Florida
(Fairfield County)
*Luria, S. B., Harvard '43, Waterbury
Lutes, R. A., Un. Illinois '67, Waterbury
*Lyall, S. S., Maulana Azad, India '65, Madison
*Lyddy, J. R., N. Y. U. '44, Stratford
*Lynch, F., Columbia '43, Westport
Lynch, J. K., Ottawa '64, New Haven
*Lynch, M. E., Harvard '57, Avon
Lynch, V. A., Jefferson '38, Bridgeport
*Lynch, V. A., N. Y. Med. Coll. '67, New Haven
*Lynch, W. A., Indiana '63, Hartford
*Lynch, W. F., Jefferson '52, New Haven
*Lyon, G. A., Cornell '41, Bridgeport
*Lyons, B. E., Yale '38, Norwalk
Lyons, K. H., Women's Med. Coll. Pa. '54, Waterbury
Lyons, W. B., Georgetown '45, West Haven
*Lytton, B., London Hospital '48, New Haven
*Mabasa, R. A., Philippines '63, New Milford
*Macaulay, W. P., McGill '59, Hartford
MacCready, W. H., Harvard '27, Windsor
MacDonald, C. A., Columbia '59, Torrington
*MacDonald, R. J., Albany '64, Farmington
*MacDougall, A. D., Cornell '43, Groton
MacGilpin, D.H., Meharry '74, Newington
Macgregor, J. V., London '28, Darien
*Machcinski, V. A., Yale '47, Danbury

Machledt, J. H., Jr., Johns Hopkins '68, Fairfield
*Macionus, R. F., Vermont '66, Cromwell
Mack, A. G., Albany '43, Trumbull
Mack, D. E., Syracuse '43, Windsor
*Mack, D. E., Syracuse '43, Windsor
*Mack, G. T., Wuerzburg '53, Cheshire
Mack, J. A., Albany '43, Bridgeport
*Mackay, I. M., Edinburgh '56, Hartford
*Mackay, W. D., Indiana '28, Salisbury
*MacKinnon, I., Cornell '51, West Hartford
MacMaster, D. R., Dalhousie '60, Litchfield
Mac Rae, D. W., Johns Hopkins '64, Orange
*Mactal, J. A., Far Eastern Un. '68, Torrington
Mactal, J.A., Far Eastern Un. '68 Torrington
*Madden, T. J., Univ. of Chicago '44, New Britain
Madison, R. L., State Univ. N. Y. '53, Stamford
Madsen, J. E., Jr., Cornell '68, New London
*Madwed, A. E., N. Y. Med. Coll. '51, Bridgeport
*Magauran, B. G., National Univ. '54, Enfield
(Tolland County)
Magavi, N.S., Bangalore Med. Coll '69, Danbury
Magavi, S.V., Kastarba 66, Danbury
Magendantz, H. G., Duke '62, New Haven
*Magida, M. G., Long Island '46, Stamford
*Magram, H. M., Columbia '52, Middletown
*Maher, P. H., N. Y. Med. Coll. '65, Greenwich
*Mahoney, J. J. McGill '33, Norwich
Mahmud, A. W., Dacca Univ. '65, Middletown
*Maidman, L., N. Y. U. '40, Wilton
*Maier, R. F., Tufts '59, Somers
Maiocco, K. J., Rochester '67, Bridgeport
Maislen, S., Vermont '14, West Hartford
*Major, J. W., Vanderbilt '39, Willimantic
Makover, R., Albert Einstein '64, New London
*Malik, J. M., King Edw. Med. Coll. Pakistan '67, Bloomfield
*Malinconico, L. L., Tufts '51, Hartford
Malitz, A.J., Columbia Un. Col. P & S, '72, Derby
*Malloy, E. F., Cornell '28, Stamford
*Malloy, T. McK., Tufts '62, Danbury
Malone, H. J., Vermont '49, Manchester
*Malone, R. F., Tufts '43, Devon
*Maloney, P. K., Jr., Georgetown '60, Norwalk
Maloney, R. H., Emory '48, Hartford
*Malyska, F. A., Georgetown '55, Bridgeport
*Manas, A., Tufts '67, Hartford
*Mancall, I. T., Pennsylvania '44, Hartford
Manchepalli, A. S. A., Mysore '61, Wallingford
*Mancinelli, M. J., Hahnemann '43, Stamford
*Mancini, A. D., Turin '56, East Haven
*Mancoll, M. M., Jefferson '28, West Hartford
*Mancoll, W., Jefferson '60, Hartford
Mandell, H. N., Columbia '50, Norwich
*Mandell, J., Boston '48, New Britain
Mandell, M., Long Island Coll. Med. '46, Norwalk
Mangi, R. J., Downstate '67, New Haven
Mangieri, J. V., N. Y. Med. Coll. '63, Bridgeport
Manheim, G., Vermont '46, New Haven
*Maniatis, W. R., Yale '47, Bridgeport and New Haven
*Manimbo, S. G., Far Eastern Univ., Philippines '63, Stamford
Maningas, A. L., Un. Santo Tomas '57, South Windsor
(New Haven County)
*Manjoney, R. C., Vermont '50, Ansonia
Manjoney, R. J., Vermont '53, Bridgeport
*Manjoney, V. A., Vermont '47, Bridgeport
Manlapaz, J. S., Santo Tomas '56, Danbury
*Mann, N. M., Long Island '45, West Hartford
*Manning, I. H., Woman's Med. Pa. '50, Norwich
*Mannix, H., Jr., Cornell '50, Hartford
*Manoharan, N. Seth G.S. Med. Coll. '71, Bristol
*Mansourian, V., Paris '67, New Haven
*Mantel, F., New York '64, Bloomfield
Manzi, J. A., Cork '55, Middletown

Mara, N. F., Vermont '62, Vernon (Hartford County)
*Maray, H.Z., N.Y. Univ. '38, Rocky Hill
Marchand, G. A., Jefferson '64, New London
Marchbanks, V. H., Jr., Howard '37, Hartford
Marcus, H., N. Y. U. '39, Greenwich
Maresh, H. R., Tufts '73, Farmington
Margolick, M., McGill '35, Putnam
Margolis, R. N., Tufts '58, New Haven
*Margolius, N. C., Cornell '33, Waterbury
*Margules, R. M., Un. Calif. '66, Newtown
*Mari, E. G., Buenos Aires '64, Waterbury
Mariani, R. A., Pennsylvania '44, New London
Maric, R., Un. Croatia '63, Ansonia
*Marieb, N. J., Rochester '59, Orange
Marignani, P., Un. Rome Italy '60, Derby
Marikar, M.A.S., Un. Ceylon '67, Hartford
*Marino, A. M., Georgetown '64, Greenwich
*Marinaro, N.A., St. Louis '30, Avon
Marino, F. S., Maryland '42, Hartford
*Marino, R. S., Boston '42, Waterbury
*Marinucci, E. D., N. Y. Med. Coll. '44, Norwalk
Marjani, M. A., Un. Tehran '61, Waterbury
Mark, H. H., Vienna '57, New Haven
Markey, P.A., Yale Univ. '69, Norwalk
*Markley, D. N., Edinburgh '36, Hartford
*Markley, H. E., Yale '43, Greenwich
*Markley, L. L., Prague '25, Fairfield
*Marks, E. M., Buffalo '46, Bridgeport
*Markwald, H. W., Berlin '37, New Hartford
*Marlow, D. J., Women's Med. Coll. of Pa. '47, Kent
Marmer, E. L., Alabama '64, Vernon
Maron, T. W., Jr., New Jersey '67, Essex
Maron, W.R., Cincinnati '73, Hartford
Marrash, S. E., Am. Univ. Beirut '57, Bridgeport
Marsh, A., St. Andrews '37, New Britain
Marsh, C. O., Women's Med. Coll. Pa. '51, West Hartford (New Haven County)
*Marsh, R. R., Harvard '45, West Hartford
*Marsh, S. H., Harvard '51, Hartford (New Haven County)
Marshak, I. J., Tufts '26, New Haven
*Marshall, B. R., Tufts '54, Hartford
*Marshall, D., Northwestern '47, Bloomfield
*Marshall, D. C., Harvard '57, Ledyard
Marshall L. F., Chicago '54, West Hartford
*Martelon, G. F., Boston '48, Bridgeport
Martin, D. N., Albany '63, Wilton
*Martin, E., Yale '40, New Britain
Martin, J. E., Dalhousie '42, Norwich
*Martin, J. G., Yale '33, West Hartford
*Martin, K. H., Yale '44, Watertown
Martin, M. G., Queen's Univ. Can. '44, Norwich
*Martin, R. S., Cornell '61, Hartford
*Martin, W. E., N. Y. Med. Coll. '52, Stratford (New Haven County)
*Martinson, E. O., Columbia '35, Madison (Middlesex County)
Marx, F. G., Pennsylvania '53, New London
*Mascoli, N. M., Jr., Georgetown '63, Waterbury
Mashman, J. H., Vermon '65, Danbury
*Masi, A. V., New Jersey Coll. Med. '62, Bridgeport
*Mass, H., Leiden '56, New Haven
*Massey, D. M., Hahnemann '36, Bridgeport
Massey, R. U., Wayne '46, Farmington
Massi, J. L., St. Louis Univ. '69, New Britain
Massie, W. J., Meharry '47, New Haven
*Masters, S.S., Yale '71, Willimantic
*Masterson, T. J., Tufts '45, Norwich
*Mastrangelo, A., Jr., Boston '39, Stamford
Mathews, J., Trivandrum '58, Enfield
*Matteis, J. T., Yale '26, Kensington
*Matthews, L. G., Seton Hall '63, Freehold, New Jersey (Hartford County)
Mattie, L. R., Yale '52, New Haven
Mattson, R. H., Boston '57, New Haven
Matyszewski, S. E., Yale '62, Waterbury
*Mauck, F. T., Pennsylvania '57, Farmington
*Mauks, C. W., Budapest '32, Danbury
Mauks, K.S., Med. Coll. Pennsylvania '69, Danbury
Maurer, W. S., Yale '38, West Lebanon. New Hampshire (Windham County)
*Maxham, D. L., Vermont '53, Fairfield
*Mayo, E. R., Tufts '38, Waterbury
*McAlenney, P. F., Yale '29, Southbury
*McAndrews, J. F., Columbia '46, Hartford
*McCalley, S. W., Case Western '69, Greenwich
McCarthy, C. P. N., Univ. Coll. Cork '60, New Haven
*McCarthy, J. D., Rochester '55, Hartford
McCarthy, R. E., Hahnemann '66, Middletown
McCaul, K. F., Nat'l. Univ. Ireland '50, Norwalk
McCawley, A., Glasgow Un. '48, Hartford
McCloskey, E. M., Jefferson '51, Hartford
*McCooey, J. H., State Univ. N. Y. '56, Hartford
McCormack, J. M., Dublin '47, Hartford
*McCormick, J.R. Jr., Univ. Conn. '72, Farmington
McCrann, D. J., Tufts '34, Hartford
*McCreery, E. P., Jr., Virginia '42, Fairfield
*McCue, M. P., Harvard '34, Waterford (Hartford County)
McCullough, C. D., N. Y. Med. Coll. '58, Bridgeport
McCullough, W. B., Columbia '65, New Haven
*McDermott, G. M., Galway Med. School '58, Bristol
McDermott, J. F., Cornell '23, Honolulu, Hawaii (Hartford County)
McDermott, J. J., N. Y. U. '52, Danbury
McDonald, J., Un. Glasgow '61, Glastonbury
*McDonald, R. L., N. Y. Med. Coll. '60, Roxbury
*McDonnell, R. R., Jefferson '45, New Haven
McDowell, A. V., Albany '52, Middletown
*McFarland, W. J., Yale '39, New London
McFarland, W. J., Jr., Yale '72, New Haven
McGann, D. M., National Univ. Ireland '52, South Windsor
*McGann, R. F., St. Mary's Hosp., London '58, Meriden
*McGarry, J. F., Vermont '46, Stratford
*McGarry, J. J., Yale '51, Darien
*McGaughey, J. D., III, Jefferson '44, Wallingford
McGowan, G. E., Laval '57, Hartford
McGowan, T. S., Tennessee '32, Storrs (Windham County)
McGrath, B. J., Yale '59, Guilford
McGuane, R. M., N. Y. Med. Coll. '53, Thompsonville
*McIntyre, F. P., Vermont '42, Stamford
*McKay, D., Queen's Univ. '56, Middletown
McKee, J. B., Jr., Virginia '59, New Haven
*McKee, D. R., N. Y. U. '59, Stamford
McKeehan, F. R., Rochester '50, New London
*McKendree, C. G., Virginia '43, Greenwich
*McKenna, J. F., California '48, Torrington
*McKeon, J. J., Hahnemann '39, Hamden
*McKeon, W. F., New York '59, Norwich
*McKnight, R. S., Pittsburgh '45, Hartford
*McKnight, W. K., Pittsburgh '35, Rio Rancho, New Mexico (Fairfield County)
McLanahan, S. M., Wayne St. '73, Putnam
McLean, C. E., Yale '45, Hartford
*McLean, T. S., Jr., Vermont '34, Vero Beach, Florida (Fairfield County)
*McLeod, C. E., Vermont '34, Middletown
McLoughlin, M. J., Nat'l. Un. Ireland '60, New Haven
McLoughlin, P. J., New York '58, Bridgeport
McNamara, J. R., Georgetown '61, Norwalk
McNamara, T. C., Georgetown Univ. '69, Norwich
*McNerney, J. C., Jefferson '27, Stamford
*McNulty, T. F., Georgetown '32, Hartford
McQuade, G. W., Dalhousie '63, Bridgeport
*McSweeney, J. J., Cornell '66, Stamford
*Meacham, C. T., Pennsylvania '30, Stamford
Meehan, B. J., Lausanne '61, Newtown
Mehta, S. S. R., Univ. of Rajasthan '68, Loma Linda, Calif. (Fairfield County)

*Meia, H. B., Nacional De Cordoba '63, Milford
*Meigs, J. W., Harvard '40, New Haven
*Meisner, B. M., Rochester '60, Manchester
*Mekrut, J. A., St. Louis '31, Sun City Center, Florida (New Haven County)
Mellisy, A., Long Island Coll. Med. '43, South Kent
Melton, A. R., S. U. N. Y. Downstate '70, Willimantic
Meltzer, S. B., Long Island '44, Bridgeport
*Mendelsohn, W., Johns Hopkins '33, Hamden
Mendelson, L. M., Med. Coll. Virginia '65, Hartford
*Mendillo, J. J., Columbia '45, New Haven
Mendoza, J. P., Jr., Santo Tomas '68, Bristol
*Mendoza, R., Mexico '50, Norwalk
Meno, G. P., Geneva '59, Norwalk
Menousek, J. A., Vermont '32, Juno Beach, Florida (Hartford County)
Menzer, A., Un. of Basel '39, West Hartford
*Meo, R. C., George Washington '34, Waterbury
Merdinolu, M. A., Istanbul '56, Norwalk
Mergenthaler, F. W., New York '61, Bridgeport
Meridy, H. W., Un. Vermont '66, Hartford
Mermann, A. C., Johns Hopkins '47, Guilford
*Merriman, H., Columbia '36, Waterbury
*Mertz, J. J., Harvard '61, Southington
*Meshken, J., Rush '37, Bridgeport
*Messinger, H. J., Basel '39, Fairfield
*Messore, G., Univ. of Naples '50, Milford
Methot, L. G., Georgetown '58, Bridgeport
*Meunier, J. L., Vermont '38, Torrington
Meyer, J. L., Long Island '49, Putnam
*Meyer, L., Albert Einstein '68, Meriden
Meyer, R.B., Harvard Univ. '62, Farmington
*Meyers, R. A., Michigan '31, Watertown
*Meyerson, S.J., Albert Einstein '74, Newtown
Michael A. H., Athens '53, Bridgeport
Michaelson, S. P., State Univ. N. Y. '72, Darien
Michalka, J. J., St. Louis '58, Bridgeport
*Micheels, L. J., Utrecht '47, Westport
Michel, L. I., Long Island '43, New Haven
Mickenberg, I. D., S. U. N. Y. '65, Southbury
Mickley, D. W., Tufts '71, Greenwich
Mickley, S. P., Harvard '71, Greenwich
*Middleton, C. J., S. U. N. Y. '64, Danielson
*Mignone, J., Yale '33, New Haven
Milano, A. F., Nat'l. Un. Ireland '66, Woodbridge
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*Milano, N. A., Georgetown '27, West Haven
*Milazzo, N. J., State Univ. N. Y. '54, Derby
*Milewski, S. A., Dublin '56, Manchester
*Milici, J. J., Hahnemann '40, West Haven
Milikow, E., N. Y. U. '64, Hartford
*Millard, D. H., Georgetown '46, Greenwich
*Millen, S. R., George Washington '38, New Haven
Miller, B., Boston '51, Bloomfield
*Miller, D. E., Hahnemann '59, Middletown
Miller, D. F., Yale '56, Waterbury
*Miller, G. R., Tufts '39, Manchester
*Miller, H. B., Rush '33, Hartford
*Miller, H. K., Columbia '32, Stamford
Miller, J. D., N. Y. U. '71, Danbury
Miller, J. M., Albany '67, Bloomfield
Miller, L. W., Boston '67, Hartford
Miller, M. M., St. Un. N. Y. '51, Cheshire
*Miller, R. B., Loyola Univ. '42, Newtown
Miller, R. G., Tufts '51, Danbury
Miller, S., Georgetown Un. '74, Bridgeport
*Miller, S. M., Tulane '41, Santa Barbara, California (Hartford County)
Milles, S. S., Rochester '55, New Haven
*Mills, B. L., Vermont '25, Bedford Heights, Ohio (New London County)
*Mills, C. W., Cornell '38, Norwalk
Milyko, A. B., Columbia '55, West Hartford
*Minor, J. V., Jr., Georgetown '46, Norwalk
*Minor, L. W., Yale '32, Middletown
*Minot, H. D., Jr., Harvard '50, Norwalk
Mintell, D. F., Jefferson '64, Glastonbury
Mirabelli, V., Padua '53, Bristol
Mirabile, C. S., Jr., McGill '63, Sharon
Mirabile, C. S., McGill '30, Farmington
*Mirabile, T. J., Georgetown '37, East Hartford
Mirkhani, M., Tehran '51, Cheshire
*Mirrer, E., Geneva '65, Waterbury
*Mirzayantz, A., Tehran '50, Branford
*Miselis, F. J., Boston '45, Uncasville
*Missier, P. A., Un. Bologna '54, Greenwich
Misuk, J. F., Georgetown '32, Meriden
Mitchell, G. V., McGill '38, Torrington
*Mitchell, P. R., George Washington '70, Hartford
Mitler, L. K., S. U. N. Y. Downstate '70, New Haven
*Mittelman, J. A., Pennsylvania '48, Bloomfield
*Mittelmann, M., Chicago '57, Hartford
Mizak, D. J., Jefferson '68, Huntington
*Mlynarski, J. A., Georgetown '39, New Britain
Moadel, M. M., Tehran '59, Westport
Moalli, D. E., Boston '61, New London
*Moench, J. C., Rochester '45, New Haven
*Mogil, M., Buffalo '39, New Haven
*Moher, J. J., Yale '37, Hartford
*Moll, D., Tufts '70, Derby
Molloy, E. M., N. J. Coll. Med. '66, Fairfield
*Molloy, P. M., Yale '59, New London
*Molloy, R. J., Cornell '48, Hartford
*Molnar, G. J., Georgetown '43, Bridgeport
*Moloney, D. R., Galway '59, Hartford
*Molumphy, P. E., Yale '44, New Haven
Mombello, G. E., Albany '64, New Haven
Monagan, T. M., Harvard '40, Waterbury
*Mongillo, F., Med. Coll. Va. '28, New Haven
Monoson, P.A., Cornell '71, Waterbury
Monroe, J. B., Un. Miami '72, Ridgefield
Montano, C., Albany Med. Coll '72, Haddam
Montegut, F.J., Jr., Meharry Med Coll. '58, Ansonia
*Montgomery, J. S., Southwestern '61, Branford
*Montimurro, J. A., Yale '52, Greenwich
*Montoni, E. J., Georgetown '55, West Simsbury (Litchfield County)
Moody, P. C., Case Western Reserve '69, New Britain
Moon, W. K., Catholic Med. Coll. '64, Torrington (Hartford County)
*Mooney, J. P., N. Y. Med. Coll. '56, Shelton (New Haven County)
*Mooney, S. Tufts '27, Bridgeport
*Moore, C. D., Queen's '28, Lehigh Acres, Florida (Fairfield County)
Moore, E. J. T., Tufts '48, Waterbury
*Moore, M. F., State Univ. N. Y. '55, New Canaan
*Moore, M. R., Queen's '29, Spring Hill, Florida (New London County)
Moore, R. W., N. Y. U. '43, Sharon
Moore, W. J., Columbia '21, Cheshire
Mordavsky, D. F., Univ. Conn. '73, Manchester
Moreschi, F. P., Bologna '51, Meriden
Morgan, K. R., Yale '42, Fairfield
*Morgan, L. G. N. Y. Med. Coll. '49, Stamford
*Morgan, W. O., Georgetown '30, Westport
Morgan, W. S., Yale '51, New Haven
*Morhardt, C. E., N. Y. Med. Coll. '61, West Hartford
*Moriarty, J. P., Vermont '47, Stamford
Moriarty, R. A., Un. Vermont '72, Mansfield Ctr. (Windham County)
Morley, D. C., Queen's '56, Greenwich
*Morrill, H. F., Harvard '25, Wolcott
*Morris, F. R., Maryland '41, Bridgeport

*Morrison, D. W., Columbia '40, Manchester
Morrison, J. B., Yale '48, Orange
Morrison, J. E., Maryland '46, Norwich
Morrison, J. W., Jr., Un. virginia '70, Middletown
*Morrison, M. A., N. Y. U. '65, Fairfield
*Morrison, R. F., N. Y. U. '64, Meriden
*Morrissett, L. E., Med. Coll. Va. '30, Richmond, Virginia (Fairfield County)
*Morrissey, V. J., Georgetown '32, Westport (New Haven County)
Morrow, H. S., Columbia '40, New Milford
Morrow, J. S., Boston Univ. '69, Hartford
*Morse, W. J. Jr., Vermont '61, New London
Morse, W. J., Vermont '31, Sanibel, Florida (New London County)
*Moses, J. A., Trivandrum, India '58, Fairfield
*Moskowitz, H., St. Univ. New York '59, West Hartford
Moskowitz, R. I., S. U. N. Y. '67, Willimantic
*Moskowitz, R. S., S. U. N. Y. Downstate '69, Westport
*Moss, A. M., Toronto '47, Fairfield
*Moss, R., St. Univ. New York '63, New Britain
Mostel, A. P., Albert Einstein '60, Stamford
Mott, F. E., Buffalo '41, New Haven
Motyka, S. J., Arkansas '38, Huntington Beach, California (Hartford County)
*Moulyn, A. C., Utrecht '30, Stamford
Moyer, W. T., Jr., Pennsylvania '47, Manchester
Moynahan, P. A., Med. Coll. Pennsylvania '68, Waterbury
*Mozzicato, S., Louisville '70, Farmington
Muangman, P., Chiengmai Un. Hosp. '64, Hartford
*Mucha, T. F., Jefferson '64, Hartford
Mueller, R. E., Yale '63, Hartford
Mujtaba, Q., Dow Med. College '67, New Haven
*Mulaire, V. J., Boston '39, Stamford
*Mulford, E. H., II, Duke '41, Norwalk
Mullin, R. L., Tufts '55, Meriden
*Mumford, D., Birminghan Univ. England '60, Hartford
Munch, R. V., St. Louis '62, Winsted
Murphy, A. G., Cornell '40, New London
*Murphy, C. A., Long Island '33, Chatham, Massachusetts (Fairfield County)
*Murphy, E. F., Tufts '55, Windsor
Murphy, J.C., Columbia '32, New York, N.Y. (Fairfield County)
Murphy, J. D., Maryland '54, Hartford
Murphy, J. J., Tufts '43, East Hartford
*Murphy, J. M., Cornell '60, Greenwich
*Murphy, J. P., N. Y. Med. Coll. '50, Cos Cob
*Murphy, O. L., Vermont '21, Simsbury
*Murphy, R. D., Tufts '47, Wethersfield
*Murphy, T. F., Jefferson '33, West Hartford
*Murray, J. G., N. Y. U. '43, Greenwich
Murray, J. H., Temple '67, Hartford
*Murray, J. T., N. Y. U. '47, New London
Murray, W. C., Tufts '53, Bristol
*Murray, W. J., Jr., Cornell '47, New London
*Musto, A., Georgetown '68, Bridgeport
Musto, D. F., Univ. Washington '63, New Haven
Myerson, D. A., Columbia '65, Derby
*Myerson, M., Tufts '61, Hartford
Myerson, P. J., Columbia '65, Derby
Mylon, E., Berlin '21, New Haven
*Naci, Y.M., Istanbul '49, Stratford
Nadel, H., Buffalo '60, Glenbrook
*Nadel, M. S., Columbia P & S '62, Middletown
*Nagaraja, U., Grant Med. Coll. '60, New Milford
*Nagle, J. A., Jefferson '55, Stamford
Nagle, M.P., Nat'l Univ. Dublin '63, Hartford
Nagourney, D., Long Island '36, Bridgeport
Naiman, P. T., Columbia '63, Bridgeport
Nair, S., Madras '51, Norwalk
*Nakhoul , J., Geneva '53, Hartford
Nallainathan, S.K., Univ. Ceylon '64, Bridgeport
Napolitano, G.J., S.U.N.Y. '74, Bridgeport
Naqvi, S.Z.H., Nishtar Med. Col. '63, New Milford
Narayan, M., Bangalore Med. Coll. '69, Wallingford
*Narayanan, C. N., Calicut '64, Hartford
Narowski, C. A., Temple '54, Derby
*Narowski, J. J., Tufts '43, Derby
Nash, I., Columbia '69, New Haven
*Nathanson, R. B., Albany '66, West Hartford
Neff, W. E., Jr., Columbia '33, Cheshire
Negus, P.E., Georgetown '69, Darien
*Neidlinger, W. J., Cornell '33, Hartford
Neill, M. H., Columbia P & S '43, Hartford
Neibel, K. G., Louvain '70, Waterbury
Nejame, F. F., Mexico '60, Waterbury
*Neligan, P., National Univ. Ireland '51, Ridgefield
Nelligan, D. J., Yale '55, Westbrook (New London County)
Nelson, R. K., Minnesota '59, New Britain
*Nelson, W.H., West Virginia '72, New Canaan
*Nelson, W. N., George Washington '26, Cromwell
Nemec, J. M., Tufts '66, Old Greenwich
*Nemoitin, B. O., Long Island '34, Stamford
Nepomuceno, M. N., St. Tomas '52, Willimantic
*Nesbitt, K. A., Albany '51, Torrington
Nesi, R. M., Univ. Bologna, Italy '65, Brookfield
Neth, W. F., McGill '55, Trumbull
*Neumann, H. H., Univ. Vienna '32, New Haven
Nevins, R. A., Georgetown '51, Fairfield
*Newberg, M. E., Columbia '63, Greenwich
*Newell, R. C., Boston '56, Bloomfield
Newman, A. A., Long Island '42, Bridgeport
*Newman, H. R., Toronto '35, New Haven
Newman, R., Johns Hopkins '30, Woodbridge
*Newman, R. A., Louvain, Belgium '70, Hartford
Newman, R. D., Un. California '62, Greenwich
Newman, R. J., S. U. N. Y. '45, Waterbury
Newton, R. F., Yale '47, Hamden
Ney, C., Johns Hopkins '37, Stamford
Nezhad, F. M., Tehran '56, Waterbury
Nicholl, R. G., Phila. Coll. Osteo. Med. '33, Greenwich
*Nichols, E., Yale '39, Hartford
*Nichols, F. L., Columbia '42, Hartford
*Nicholson, R. E., Tulane '42, Hartford
*Nickou, N., Univ. Cincinnati '49, Branford
*Niederman, J. C., Johns Hopkins '49, New Haven
*Niejadlik, D. C., Univ. N. Y., '67, Middletown
Niell, J. P., Nat'l. Un. Cordoba-Argentina '65, Stamford
*Nielsen, T. M., Copenhagen '38, New London
Niemann, C. P., Wurzburg '52, Sherman (Litchfield County)
*Niesyn, E. D., Georgetown '53, Bridgeport
Nieto, R. A., Nat'l. Univ. Columbia '70, Manchester
*Nijensohn, D. E., Nat'l. Univ. Cuyo, Mendoza, Argentina '69, Bridgeport
*Nino, A. F., Nat'l. Un. Colombia '63, Hartford
Nipper, T.P., Loyola '71, Danbury
Nix, H. R., Alberta, Canada '61, Manchester
*Nixon, J. T., N. Y. U. '51, New Haven
*Nocks, J. J., Pennsylvania '68, West Haven
*Nolan, J. J., Pittsburgh '42, Stamford
Nolan, J. O'L., Tufts '40, Hartford
*Nolan, T. F., Yale '49, Greenwich
*Nolasco, D. R., Coimbra '51, New Haven
Noniewicz, S. J., St. Louis '56, New Britain
Noonan, J.P.A., Univ. Ottawa '66, Southington
Noonan, R. H., Long Island '47, Bridgeport
Norbert, G. F., Tufts '65, Avon
*Norman, P. S., Tufts '56, Manchester
Norooz, H.A., Pahlavi Univ. '67, Bridgeport
*Norrington, E. G., N. Y. Med. Coll. '39, Norwalk
Northman, F. F., Breslau '34, Laguna Hills, California (Fairfield County)
*Norton, W. S., Columbia '37, New Haven
Nosce, L. V., Sto. Tomas '63, Manchester
Nosce, M.G., Univ. Santo Tomas '61, Manchester
*Noto, P. J., New Jersey '69, New Haven

*Nourizadeh, A. R., Tehern, '59, New Britain
Nova, S., Cincinnati '67, Bloomfield
Novack, S. N., S. U. N. Y. '66, Norwalk
*Nuland, S. B., Yale '55, New Haven
*Nunes, M., Howard '54, Waterbury
*Oakley, D. E., Un. Colorado '71, Norwich
*O'Brasky, L., Jefferson '22, New Haven
*O'Brien, F. H., Columbia '38, Waterbury
O'Brien, F. J., Boston '54, Hartford
O'Brien, G. J., McGill '63, Willimantic
O'Brien, J. E., Vermont '61, Wethersfield
O'Brien, J. J., Downstate Med. Ctr., '68, Hartford
O'Brien, M.J. Coll. Osteopathic Med. '43, North Haven
*O'Brien, M. M., St. Louis Univ. '72, Mystic
O'Brien, S.T., Vermont '71, Enfield
*Oceretko, J., Friedrich-Alexander Un. '50, Bristol
*O'Connell, C. G., Un. Coll. Ireland '62, Vernon
O'Connell, E. B., Yale '41, New Haven
O'Connell, E. J., Tufts '34, Farmington
*O'Connell, J. D., Harvard '39, Hartford
O'Connell, M. F., Yale '22, West Hartford
O'Connell, P. B., Hahnemann '67, West Hartford
*O'Connell, P. H., Loyola '29, Norwich
*O'Connell, R. L., Columbia P & S '51, Stamford
O'Connell, T. J., N. Y. Med. '48, Hartford
O'Connell, C. F., Un. Coll. Galway '58, Glastonbury
O'Connor, F.V., New Jersey '74, Unionville
O'Connor, L. E., Univ. of Galway '55, Rockville (Hartford County)
Oesau, H. T., Jr., Jefferson '62, Bridgeport
*Ogilvie, J. B., Yale '34, Stamford
Ohanesian, J. H., Hahnemann '49, New Britain
*O'Hayre, W. L., Un. Colorado '59, Hartford
*O'Hurley, J. G., Jefferson '52, Hartford
Okasha, M.S., Cairo Univ. Med Col. '68, Norwich
Okstein, C. J., Tufts '70, Willimantic
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O'Looney, J. J., Jr., Jefferson '45, Bridgeport
Olore, L., Tufts '43, Waterbury
*Olsavsky, J. C., Georgetown '43, Bridgeport
Olsen, R. C., Long Island '45, New London
Olson, E.H., Nebraska '72, Hartford
Olson, L. E., Yale '54, New Haven
O'Neil, V. D., Un. McGill '41, Newington
O'Neil, J. J., Tufts '48, New Haven
Onglingswan, W. T., Philadelphia '61, Willimantic
Opinsky, M., Georgetown '46, Hartford
Opsahl, J. C., Alberta '54, Boston, Mass. (New Haven County)
*Orbach, E. J., Berlin '24, New Britain
Orfitelli, O.P., St. Un. N.Y. '51, Hartford
*O'Regan, P. T., National '52, Meriden
O'Reilly, D. J., Un. Adelaide, Australia '70, Hartford
O'Reilly, H. F., St. Un. N. Y. '53, New Britain
*Orgler, G.K., Creighton Un. '73, Torrington
*Orgun, I. N., Istanbul '53, Avon
*Orlandi, R. J., N. Y. Med. Coll. '68, New Milford
Orlins, M. D., Amsterdam '56, Norwalk
*Orlowski, A. W., Tufts '36, Torrington
*Ormrod, J. K. T., McGill '43, Hartford
*Ornston, D. G., Jr., Pennsylvania '59, New Haven
*O'Rourke, G. W., New York Med. Coll. '61, Fairfield
O'Rourke, J., Georgetown '49, Farmington
*Orphanos, J. R., N. Y. Med. Coll. '58, Greenwich
Orr, H. D., Boston '48, Norwalk
*Orr, J. T., Columbia '52, Danbury
Orth, R. H., Cornell '53, Stamford
Ortiz, F., Cayetano Heredia Med. Sch. '70, Meriden
*Osadchey, L. M., Upstate Med. Ctr. '63, Meriden
Osborn, D.J., Cape Town '62, Waterbury
*Oster, K.A., Cologne '34, Bridgeport
Ostriker, M., Bellevue '52, Stamford
Ostriker, P. J., State Univ. N. Y. '50, Stamford
Ostrov, M. R., Chicago '63, Waterbury
Otis, F. N., Tufts '18, Bloomfield (New Haven County)
Otis, R. D., Yale '49, Hartford
O'Toole, P., Trinity '53, Norwich
Oviedo, A., Javeriana Univ. '65, Hartford
*Owens, A. P., McGill '37, Bridgeport
Owens, G., Harvard '50, New Britain
Owlia, D., Tehran '68, Hartford
Oxley, L. L., Meharry Med. Coll. '59, Storrs (Windham County)
*Oxnard, E. W., Harvard '36, Cheshire
Oxcomert, S., Ankara '47, Stamford
Ozenberger, J. M., Missouri '58, Clinton (New Haven County)
*Ozonoff, M. B., Northwestern '54, Newington
*Paardenkooper, J., Utrecht '58, Moodus
Pace, S. A., Un. Rome '70, Bridgeport
*Pace, S. F., Rome '52, Wethersfield
Padula, R. D., Cincinnati '30, Fort Myers, Florida (Fairfield County)
Paggioli, J. W., Georgetown '56, Meriden
*Pagliaro, J. J., Georgetown '37, Shelton
Painter, R. L., Indiana '59, Putnam
Painter, R. W., Tennessee '46, Hartford
*Palermino, D. A., Tufts '58, Hartford
Palesty, J., Un. Florence, Italy '63, Waterbury
*Palker, N. A., Goa Medical College '68, Niantic
*Palluotto, W. V., N. Y. Med. Coll. '50, New Haven
Palm, C. R., N. Y. U. '63, Torrington (New Haven County)
*Palma, J. F., Vermont '59, East Hartford
*Palmer, W. M., Cornell '51, Waterford
*Palmieri, M. L., Yale '32, Middletown
Panaligan-Noble, R., Un. Santo Tomas '67, Cheshire
*Panettieri, A. J., Vermont '37, Bridgeport
Pang, S. C., Darien Med. Sch. '56, Norwalk
*Pantaleo, C. V., Creighton '43, New Haven
*Papa, J. S., Tufts '28, Fort Lauderdale, Florida (Hartford County)
Papowitz, A. J., Louisville '66, Norwalk
*Pardi, M. T., Pisa-Italy '61, Milford
*Pardi, V. M., Un. Pisa '60, Hartford (New Haven County)
*Parente, L., Emory '31, Hamden
*Parisi, A. J., Tufts '44, New Haven
*Park, S., Seoul Nat'l. Univ. '49, North Grosvenordale
*Park, Y. J., Seoul Nat'l. Un. '63, Bridgeport
*Parke, D. W., Ohio '50, Meriden
Parker, L. P., McGill '66, Hartford
*Parker, R. L., Western Ontario '41, Bridgeport
*Parlato, H. A., N. Y. U. '36, New Britain
*Parlato, M. A., Yale '08, Derby
*Parrella, G. S., Yale '41, Milford
*Parrella, L. A., Tufts '34, North Haven
*Parry, M. F., Columbia '70, Stamford
Parshley, P. F., Pennsylvania '27, Pinehurst, North Carolona (Hartford County)
*Pascal, T. J., Rush '31, Bridgeport
*Pascale, J. F., Univ. Chicago '59, East Amherst, New York (New Haven County)
Pascual, R. S., Un. of the East '64, New London
*Pasetto, E., Vermont '36, Waterbury
*Paslawski, W., Akademia Medzcyna Poland '54, Windsor
*Pasquariello, D. W., Naples '36, Bridgeport
*Passarelli, M. N., Yale '59, New Haven
*Passaretti, M., Tufts '68, Manchester
Passman, B., Un. Vermont '59, Bloomfield
*Pastel, H., Columbia '48, Manchester
*Pasternack, S., Univ. Lausanne '71, Bloomfield
*Pasternak, H. S., SUNY '60, Hartford
Pasternak, M., Toronto '36, Longboat Key. Florida (New Haven County)
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*Patterson, E. S., Iowa '54, Meriden

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°Patterson, H. C., Bowman Gray '45, Danbury
Patterson, J. W., Western Reserve '49, Farmington
°Patterson, M. B., Boston '45, Greenwich
Pattillo, J. G., Un. Geneva '64, Windsor
Paulhus, J. J., New Jersey '70, Putnam
Pavlo, L.J., Mainz, W. Germany '55, Derby
Pavlo, M. M., Univ. Prague '45, Derby
Peacock, A. U., Rush '33, Hartford
°Pearce, M. G., Texas '22, Austin, Texas (Fairfield County)
Pearlstein, A. T., Chicago '63, Derby
°Pearlstone, A. D., State Univ. N. Y. '55, Fairfield
Peck, A. S., Jr., N.Y.U. '67, Hartford
°Peck, B. C., Long Island '31, New Britain
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Pella, J., Havana '42, Middletown
°Pellegrino, E. D., N.Y.U. '44, New Haven
°Pelliccia, O., Jr., Johns Hopkins '39, New Haven
°Pelz, K. S., Vienna '32, Clinton (New Haven County)
Pembrook, R.C., Minnesota '63, New London
Penner, S. L., Columbia '34, Bridgeport
°Pennington, R. B., Virginia '51, Middletown
°Pentz, P. G., Jefferson '61, Hartford
°Pepe, A. J., Maryland '35, Ansonia
°Pepe, V., Yale '46, Meriden
°Pepper, D. S., Pennsylvania '32, Gladwyne, Pennsylvania (Hartford County)
°Perakos, G. P., Georgetown '32, Kensington
°Peralta, C., Santo Domingo '50, Bridgeport
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°Perkins, J. A., McGill '41, Hartford
°Perkins, J. H., Pennsylvania '66, Hartford
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°Persons, R. E., Syracuse '43, Meriden
°Pesce, J. R., Louvain '67, Bridgeport
Pesiri, R. A., Ottawa '59, Stamford
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°Peters, D. H., Tufts '56, Kent
°Peterson, C. G., Jr., Yale '55, Willimantic
°Peterson, D. M., Pennsylvania '56, New London
°Peterson, R. C., Yale '48, Stratford
°Peterson, W. S., Yale '71, Waterbury
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°Petrelli, J., Yale '25, New Haven
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°Petrie , S. J., Temple '50, Derby
°Petrillo, C., Yale '38, New Haven
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°Piacente, S. S., Rochester '40, Hartford
°Piazza, G. J., Boston '32, Orange
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°Piccolo, P. A., Maryland '37, New Haven
°Pickett, L. K., Yale '44, New Haven
°Pierce, J. A., Duke '55, Wethersfield
°Pierce, J. A., Georgetown '50, Newington
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°Pierson, L. A., Tufts '27, Meriden
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°Pike, M. M., Harvard '25, Farmington
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°Pimpinella, R. J., Rochester '60, Torrington
°Pina, B. D., Howard '69, East Hartford
Pincus, J. H., P & S Columbia '60, New Haven
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°Pious, W. L., Jefferson '32, Clewiston, Florida (New Haven County)
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°Pitegoff, C. H., St. Louis '40, New Haven
°Pitegoff, G. I., St. Louis '37, Hartford
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°Pitts, N. E., Sheffield, England '52, Stonington
°Pizzo, P. S., N. Y. U. '45, Hartford
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°Plansky, R.L., Univ. Louvain '72, Stamford
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°Paltz, E. J., Pennsylvania '43, Glastonbury
°Paltz, J., Cologne '31, Manchester
°Plaut, E. A., Columbia '53, Hartford
Pleban, W. E., Louvain '64, Bridgeport
°Plunkett, E.R., George Washington Un. '48, Fairfield
°Pocock, H. D., Jr., Univ. Cincinnati '43, Fairfield
°Poczabut, J. S., Vermont '41, Stamford
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°Polayes, I. M., Albany '59, New Haven
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°Polivy, C., N. Y. U. '42, Hartford
°Poll, G.G., Univ. Vienna '37, Westport
°Pool, J. L., Columbia '34, Norwalk
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°Pope, R. H., Johns Hopkins '45, Bridgeport
Portney, L. M., St. Univ. New York '59, Bridgeport
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°Poutas, J. J., Harvard '30, Old Greenwich
°Poverman, D., Vermont '32, New Haven
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°Prangley, A. G., Jr., Cornell '52, Greenwich
°Pratt, H. S., Louisiana State '58, Meriden
°Preble, C. R., Washington '53, Glastonbury
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°Prestley, W. F., Harvard '40, Hartford
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°Preston, T. R., Yale '25, West Hartford
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Pringle, E. W., Tufts '66, Higganum
°Prins, S. A., Amsterdam '31, Middletown
°Prioli, K. M., Seton Hall '60, Norwich
°Privitera, J. H., Med. Coll. Virginia '69, Torrington
°Prokesch, C. E., N. Y. Med. Coll. '49, New London

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*Prosser, F. D., Cornell '28, Putnam
*Prouty, R. L., Ohio St. '49, Norfolk
Provato, F.L., St. Un. New York '74, Norwalk
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Prunier, J. H., Cornell '56, Greenwich
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*Pua, P. K., Philippines '58, Bridgeport
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*Pulaski, J. E., Georgetown '44, Hartford
*Pullen, E. M., Cornell '24, New Canaan
*Pullen, R. D., Yale '54, Windsor
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*Purcell, D. P., Nat'l Univ. Dublin, Ireland '56, Manchester
*Purnell, M. A., Boston '49, Rockville
*Purnell, O. J., Cornell '42, Vernon
*Purney, J., McGill '39, Bristol
Purpora, D. P., Un. Bologna '71, Derby
*Pyrtek, L. J., Rush '42, Hartford
*Pyun, K. S., Severance Union Med. Coll. '57, Meriden
Querijero, G. B., Un. East Philippines '64, Waterbury
Quigley, W. F., New York Med. Coll. '56, Waterbury
*Quintiliani, A., Harvard '29, Norwich
Quinto, E. L., Lausanne '59, Hartford
Rabinovitch, P. I., Vermont '63, Waterford
Rablen, E. C., Graz, Austria '50, Quaker Hill
*Rabuffo, J. V., Georgetown '65, Middletown
Raccuglia, G., Rome, Italy '50, New Haven
Rackliffe, R. W., McGill '52, New Britain
Radding, P., Harvard '48, Hartford
Radoff, A.M., Hahnemann '72, New Haven
Radom, M. M., Jefferson '25, Hartford
Radowiecki, M. W., N. Y. Med. '43, Hamden
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Raff, N. C., Johns Hopkins '61, Westport
*Raffa, J., Columbia '34, Glastonbury
*Raffaele, F. J., W. Ontario '30, Old Greenwich
Rafkind, A. B., Paris '37, Middletown
Ragaza, A. T., Univ. of The East '66, Milford
*Ragaza, E. P., Santo Tomas '63, New Haven
*Ragland, S., Jr., Med. Coll. Virginia '50, Colebrook
*Ragusa, R. P., Georgetownn '51, Bridgeport
Raheb, E. B., Georgetown '56, Danielson
Rainville, T. J., St. Univ. New York '61, Stamford
*Ralph, F. T., Temple '43, Darien
Ramachandran, M., Colombo, Ceylon "66, Bridgeport
*Ramanan, S. V., Univ. Madras '73, Hartford
*Ramirez, L. M., National Univ. '54, Bridgeport
Ranade, V.R., Seth G.S. Med. Coll '70, Hartford
Randolph, M. F., Rochester '43, Danbury
Ranganathan, V., Madras Med. Coll. '53, Rocky Hill
Ranieri, A., Jr., Un. Virginia '71, New Haven
Ranish, M., Upstate '67, Waterbury
Rankin, B. F., McGill '19, West Hartford
Rankin, C., Nebraska '43, West Hartford
Rankin, D.C., Un. Rochester '66, Bridgeport
*Ransome, O. J., McGill '69, Naugatuck
*Raphael, M. C., Leiden '53, Southbury
*Raphan, H., Un. Basle (Switz) '65, Waterford
Rapkin, R. M., Tufts '65, Guilford
Rapoport, A. M., S. U. N. Y. '66, Greenwich
*Rapoport, L. M., N. Y. Med. Coll. '50, Milford
Rapoport, M., Cincinnati '64, Bridgeport
Rappaport, L. N., Columbia '64, Bristol
*Rasmussen, H. N., Tufts '25, Uncasville
Rathey, U. K., Munich '53, Wallingford
Rauch, E. A., Far Eastern '65, Cheshire
Ravden, R., Univ. Capetown '42, Bridgeport
*Rawls, C., Med. Coll. Va. '31, Stamford
Ray, M. E., S. U. N. Y. Downstate '69, Fairfield
*Raycroft, J. F., St. Univ. N. Y. '61, Hartford
*Read, F. A., Yale '34, Riverside
*Reade, E. G., Jefferson '16, Southern Pines, North Carolina (Litchfield County)
Reardon, G. E., Albany '56, Hartford
*Reber, R. E., Columbia '62, Greenwich
Redlich, F. C., Vienna '35, Los Angeles, California (New Haven)
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Reed, D. M., N. Y. U. '67, Danbury
*Reed, D. P., Yale '59, Waterbury
*Reed, J. F., Cornell '41, Hartford
*Reed, M.L., Temple Univ. '69, Hartford
Reich, L.H., Univ. Pennsylvania '70, New London
*Reichenbach, A. E., Tufts '38, Waterbury
Reichgut, M. H., Pennsylvania '64, Bridgeport
*Reidy, J. C., George Washington '43, Winsted
*Reilly, J. J., Georgetown '67, New London
Rein, J. M., Columbia P & S '63, Old Greenwich
*Reinfrank, R. F., Long Island '49, Hartford
Reiser, M. F., Cincinnati '43, New Haven
Reitwiesner, A. G., Long Island '38, New Fairfield
*Rem, E. A., Long Island '47, New Canaan
*Renda, J. L., Yale '68, Waterbury
Renehan, J. M., Tufts '28, Ansonia
*Renshaw, T.S., Ohio State '66, Newington
Rentsch, J. B., Virginia '55, Glastonbury
*Rentsch, S. B., Michigan '23, Derby
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*Rentz, R. E., Cornell '55, West Hartford
*Resnick, J. S., Pennsylvania '59, Stamford
*Resnik, E., McGill '30, New Britain
*Resnik, H., Johns Hopkins '31, Bridgeport
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*Reyelt, W. P., Jr., Med. Coll. Virginia '60, Sharon
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*Reynolds, J. A., Tufts '36, Waterbury
*Reynolds, R. G., Harvard '26, West Hartford
*Reynolds, W. M., Columbia '31, Stonington (Fairfield County)
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*Rhame, H. E., Jr., George Washington '50, Fairfield
Rhee, C. H., Seoul Nat'l. Un. '61, Bridgeport
Rhee, S. S., Seoul Nat'l. Un. '58, Hartford
*Rhinehart, J. W., N. Y. Med. Coll. '55, Newtown
*Rhoades, E. J., Yale '43, New Haven
*Ribner, H., Tufts '34, Fairfield
*Ricca, R. A., Pennsylvania '40, Glastonbury
*Riccio, F. J., Rome '42, Bridgeport
Riccio, J. S., St. Louis '37, Middlebury
*Riccitelli, M. L., Yale '22, New Haven
*Rich, C. F., Pennsylvania '64, Hartford
*Richar, W. J., Cornell '46, Stamford
Richards, N. R., Uausanne '55, Waterbury
*Richards, W. R., Cornell '35, Hamden
*Richeimer, W. G., McGill Un. '69, Norwich
Richman, D. P., N. Y. U. '42, South Norwalk
Richman, S. M., Washington '58, Bloomfield
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*Ridgway, W. S., Virginia '46, Stamford
*Ridlon, H. C., Columbia P & S '58, Hartford
Riemer, H. O., Un. Innsbruck '39, Shelton (New Haven County)
Rifkin, B. G., Cape Town '54, New Haven
*Rigney, B. F., Yale '67, New Haven
*Rilance, A. B., McGill '31, New Haven
*Riley, J. A., Yale '51, New Haven
*Rimai, M. L., Bruxelles '66, Bloomfield
Rinaldi, M. J., St. Louis '65, Hartford
Rinaudo, P. A., Torino '45, Berlin (New Haven County)
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Rixon, J. D., Creighton '70, West Hartford
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Rogowski, J. P., Georgetown '56, Fairfield
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*Rosenberg, B. L., McGill '43, Danbury
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*Rosenberg, C. H., Buffalo '44, Stamford
*Rosenberg, H. A., Vienna '37, Bridgeport
*Rosenberg, J. E., Northwestern '66, Hartford
*Rosenberg, M., Manitoba '55, Hartford
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Rossi, M. A., St. Louis '62, Hartford
Rosson, R. S., Harvard '58, Hartford
Rost, D. M., Iowa '63, Waterbury
*Rostenberg, P. O., Arkansas '71, New Fairfield
Rotatori, E. S., Georgetown '58, Hartford
Rotenberg, D., Boston '65, Hartford
Roth, F. E., N. Y. U. '25, Hartford
Roth, M. S., N. Y. U. '59, Hartford
*Roth, O., Vienna '37, New Haven
*Roth, S., Lausanne '59, New Haven
Roth, S. Z., Vienna '36, New Haven
*Rothblatt, R., Tufts '32, Plantation, Florida (Windham County)
Rothfeld, P. M., Yale '72, Waterbury
*Rothstein, D., L. I. College Hospital '25, Southbury
*Rothstein,I., N. Y. U. '33, West Hartford
Rottenberg, R.W., Tufts Univ '68, Danbury
*Rouman, J. C., Northwestern '53, Hartford
Rourke, T. A., Columbia '37, Greenwich
*Rousseau, D. G., Vermont '45, Taftville
*Roussis, K., Un. Thessaloniki, Greece '58, Hartford
Rowett, D., Penn '71, Essex
Roy, G., Med. Coll. Calcutta India '69, Middletown
*Rozen, A. A., Yale '37, Hamden
Rozycki, J. S., Academy of Med., Poland '53, Waterbury
*Ruan, W., Chiangmai '69, Bridgeport
*Ruben, H. L., Northwestern Un. '66, New Haven
*Ruben, R.S., George Washington Un. '71, Danbury
Rubenstein, H.M., Western Ontario '70, Stamford
*Rubenstein, S. R., Un. Texas at San Antonio '71, Waterbury
Rubin, A., Geneva '29, Hartford
*Rubin, A. A., Utah '48, New Haven
Rubin, L. R., Syracuse '58, Danbury
*Rubin, M. L., Harvard '61, Manchester
*Rubinow, M. B., Long Island '42, Manchester
*Ruby, M. H., Columbia '21, Waterbury
Ruby, R. J., Baylor '36, Waterbury
Rucker, L. G., Meharry '49, Storrs (Windham County)
Ruderman, M., Hahnemann '61, Hartford
Rudnicki, R. D., S.U.N.Y. Downstate '68, West Hartford
Ruffett, D.S., Boston '72, Hartford
Ruiz, R. R., Havana '43, Danbury
Rusch, O. F., Un. Munich '64, Bridgeport

Russell, D. G., Tufts '54, Bristol
Russell, G. G., Harvard '19, West Hartford
*Russell, T. H., Yale '10, Hamden
Russell, W., St. Andrew's Scotland '57, Meriden
*Russman, B. S., Tufts Univ. '63, Newington
Russman, C., Tufts '23, Hallandale, Florida (Middlesex County)
*Russo, J. N., Vermont '45, Hartford
*Russo, J. R., Columbia '43, Bridgeport
*Russo, R. D., Georgetown '43, Bridgeport
*Russo, R.D., Jr., Tulane '73, Bridgeport
*Russolillo, G. E., George Washington '68, Hartford
*Russow, E.H., Un. Rostock, Germany '34, Ridgefield
*Ruszkowski, R. J., Med. Coll. Wisconsin '68, Waterbury
*Rutherford, J. W., Tufts '53, New Canaan
*Rutner, A., N.Y.U. '73, Cromwell
Ruxin, R. L., Case Western Reserve '71, Ridgefield
Ryan, J. E., Albany '48, Easton
*Ryan, J. J. D., Columbia '41, Stamford
Ryan, R. H., Univ. Vermont '72, Sharon
Ryan, S. J., Columbia '47, Waterbury
*Ryan, V. G., Yale '34, Portland
*Ryan, W. A., McGill '45, Stamford
*Ryan, W. D., N. Y. Medical '53, Wethersfield
Ryan, W. F., Jr., Tufts '47, Hartford
Saccio, J. D., Yale '59, New Haven
*Sacco, J. J., Loyola '55, Norwalk
Sachs, F. L., Columbia '63, New Haven
*Sachs, J. J., N. Y. U. '40, Hartford
*Sacks, H. S., Cornell '52, Westport
*Sacks, K. L., Pittsburgh '69, Fairfield
*Sadowski, J. S., Georgetown '55, Hartford
*Safford, T., Jr., Long Island '47, Ridgefield
*Saidel, J. W., Chile '38, Bridgeport
Saini, O. P., Med. Coll. Anristar, India '63, Manchester
*St. James, A. T., Long Island '44, Wallingford
*St. John, L. A., Fordham '20, Wethersfield
*St. John, N. E., George Washington '48, Wethersfield
Salerno, N. R., Jefferson '64, Hartford
*Salerno, S. A., Georgetown '59, Greenwich
Salgado, A. G., Un. of the East Med. Ctr. '69, Hartford
*Salib, F. B., Alexander's Fac. Med. '65, Hartford
*Salinger, R., Johns Hopkins '25, New Haven
Sallick, R. M., Cornell '62, Norwalk
*Saltzman, M., Berne, Switzerland '58, Plainville
*Saltzman, S. H., State Univ. N. Y. '51, Hartford
Salvio, D. G., Padova Univ. '57, Bridgeport
Salzman, M. A., Un. Guadalajara, Mexico '72, Cheshire
Samai, H., Tehran Med. Sch. '63, Norwalk
*Samponaro, N., Johns Hopkins '29, Torrington
*Samson, D. P., Columbia '43, Thomaston
Samson, D. W., New Jersey '63, New Britain
Samuelson, A. W., Tufts '48, Bridgeport
Sanchez, R., Caldas Univ. '66, Danbury
*Sandler, G., Tulane '50, Willimantic
*Sandler, M. J., Tulane '55, Willimantic
*Sandulli, G. R., Tufts '29, Watertown (New Haven County)
Sangree, M. H., Jr., Cornell '59, Waterbury
Sansing, J. G., Yale '66, Torrington
*Santagata, P. W., Georgetown '55, Stamford
Santella, S. M., Creighton '57, Bridgeport
*Santiccioli, A. B., Bologna '40, Norwich
Santilli, J., Jr., Georgetown '68, Bridgeport
*Santomauro, A. G., Columbia P & S '69, Bridgeport
*Santopietro, O. O., N. Y. Med. Coll. '48, Waterbury
Saperstein, S., Chicago Med. '60, Danbury
Saracco, F. P., Catholic Un. Belgium '66, Hamden
Saracino, L., Bari '44, Norwich
*Saraczynski, D. L., Zurich '56, Bridgeport
Sarter, H., Un. Zurich, Switz. '57, West Hartford
Sarwar, A.S.H., Dacca Univ. '69, Fairfield
Sasaki, C. T., Yale '66, New Haven
*Sassano, F.G., Georgetown '68, Hartford
Sataline, L. R., Bologna '56, Cheshire
Satlof, D. M., Emory '61, Hartford
*Saunders, F. P., Boston '58, Danbury
*Saunders, G. R., Cornell '41, Old Saybrook
Saunders, W. L., Rochester '49, Elmwood
Sava, G. A., Ottawa '57, Stamford
Savak, J. E., Boston '45, Springdale
Savarese, E. C., Univ. Rome '71, Waterbury
*Savin, R. C., Florida '61, New Haven
*Savin, S., Vermont '45, Bridgeport
*Savitsky, E., N. Y. C. '41, Stamford
Savyckyj, J., Cornell Univ. '70, Riverside
*Sawicki, L. A., Boston '48, Wallingford
*Sawyer, C. E., Tufts '51, Stafford Springs
*Sawyer, J. D., Vermont '44, Norwich
Sax, R. E., Western Ontario '63, Bridgeport
*Saxe, L. P., Kansas '46, New London
Saxon, R. J., Upstate N. Y. '69, Bloomfield
*Sayers, D. O'C., Tufts '35, Waterbury
Sayers, J. H., Tufts '56, Hartford
*Sayers, J. J., Tufts '35, Hartford
*Sayers, R., Univ. Louvain '53, Madison
Scalice, R. A., N. Y. Med. Coll. '67, Torrington
*Scalzi, L. C., Bologna '37, Bridgeport
*Scarpa, F. J., Johns Hopkins '67, Derby
*Scavetta, J. F., Loyola '67, New Canaan
*Scavo, V. J., N. Y. U. '58, Bridgeport
Schachtel, B.P., Columbia P & S '70, Bridgeport
Schachter, E. N., N. Y. U. '68, New Haven
*Schapira, H. J., Univ. Geneva '62, New Haven
*Schardt, W. M., N. Y. U. '45, Manchester
Schare, G. D., Med. Coll. Virginia '67, Bridgeport
Schatten, S. S., N. Y. U. '31, West Hartford
Schear, W. A., N. Y. Med. Coll. '54, Thompsonville
Schechtman, C. T., Vermont '26, New Britain
*Scheer, C. W., Stanford '56, Meriden
*Scheer, E. H., Tufts '45, New Britain
*Scheer, E. S., Geneva '57, Branford
Scheig, R.L., Yale '56 Newington
Scherr, E. H., Med. Coll. Va. '46, New Haven
Schildgen, F.H., New Jersey Med Coll. '72, Torrington
Schipke, R. E., N. Y. Med. Coll. '46, West Hartford
Schioppo, D. B., Seton Hall '63, New Haven
Schlein, A. P., Jefferson '65, Bridgeport
Schlessel, T. E., Rochester '55, Hamden
Schloss, W. A., N. Y. U. '40, West Hartford
Schmidt, C. W., Buenos Aires Un. '57, New London
*Schmidt, J. L., West Virginia '64, Mystic
Schmiedeck, A. A., Vienna '49, Weston
*Schmitt, D., Physicians & Surgeons '54, Old Greenwich
Schmoll, R. D., Pennsylvania '57, Bloomfield
Schnap, I., Long Island '29, Bloomfield
Schnatz, J.D., Univ. Buffalo '57, Hartford
Schneider, R. G., N. Y. U. '56, Westport
*Schneider, W., George Washington '30, Rockville
Schneiderman, W. L., N. Y. Med. Coll. '74, New Hartford
*Schoenwald, H. R., Georgetown '58, Darien
Scholan, F. J., Tufts '55, Southport
*Scholand J. F., Harvard '66, New Britain
Scholhamer, C. F., Yale '42, Hamden
Scholhamer, C. F., Jr., Yale '72, New Haven
Scholz, H. D., Breslaw '51, New London
Schowalter, J. E., Wisconsin '60, New Haven
Schreiber, S. J., Chicago '58, New Haven
*Schreuder, O. B., Oregon '24, Marlborough
Schrier, R. I., Chicago '52, New Haven
Schubert, A. S., Georgetown '64, Avon
Schulman, P. L., St. Univ. New York '58, Norwalk
Schultz, M., N. Y. U. '43, Westport
*Schupack, S. D., Tufts '24, New Britain
*Schurgast, A. W., Cincinnati '45, Meriden
Schuster, C. L., N. Y. U. '64, New Canaan
*Schuster, H. S., N. Y. U. '64, West Hartford

*Schwartz, A. H., N. Y. U. '58, New Haven
*Schwartz, A. J., Columbia '59, Stamford
*Schwartz, G. L., Cincinnati '67, Rockville
*Schwartz, H., Colorado '43, Chicago, Illinois (Hartford County)
*Schwartz, H. N., Med. Coll. Virginia '37, West Hartford
Schwartz, K. V., Cornell '71, Derby
Schwartz, L., Tufts '57, Hartford
*Schwartz, M. D., Yale '59, New Haven
*Schwartz, M. L., N. Y. Med. Coll. '68, New Haven
*Schwartz, P. E., S. U. N. Y. '60, Norwalk
Schwartz, R. D., State Univ. Brooklyn '52, Danbury
*Schwartz, S. S., Tufts '46, New Haven
*Schwartz, H. P., Vienna '38, Norwich
*Schweizer, R. T., Tufts '64, Hartford
*Schwimmer, R. R., Temple '49, Greenwich
Scialla, A. V., New Jersey '66, Hamden
*Sciarillo, J. J., Stritch School of Medicine '50, Bridgeport
*Scoville, W. B., Pennsylvania '32, Hartford
Scudder, W. T., Physicians & Surgeons '55, Simsbury
Sculco, M. J., Boston '69, Norwich
*Scull, E., Jefferson '48, Hartford
Scully, H. F., N. Y. Med. Coll. '56, West Hartford
*Scully, R. T., Georgetown '35, New Britain
*Seah, C. H., Royal Coll. Surgeons, Ireland '64, New Haven
Seamonds, P., Univ. of Sidney, Australia '63, Greenwich
*Sears, L., Harvard '29, Norwich
*Secor, R. C., Upstate Med. Ctr. '39, Hartford
Segall, E. M., Howard '58, Waterbury
Segel, S., Vermont '35, Norwich
Segool, R.A., McGill '72, Enfield
*Seguljic, N. J., Georgetown '55, Bristol
Seibert, A. F., Yale '27, Berlin
Seide, M. J., Chicago '53, Hartford
Seigle, A. M., S.U.N.Y. '70, New Haven
*Seigle, S. P., Harvard '40, Hartford
*Sekerak, R. J., Maryland '34, Bridgeport
Selcow, J. E., Vermont '59, Hartford
Seleman, A. W., Georgetown '55, Torrington
*Seliger, G., St. Univ. N. Y. '62, Norwalk (New Haven County)
*Seligson, D., Utah '46, New Haven
*Sella, E. J., Stritch, Loyola '66, New Haven
*Sellner, H. A., Columbia '67, Danbury
Selsky, L. M., Johns Hopkins '65, Bristol
Selzer, R. A., Albany '53, New Haven
Senathirajah, K. N., Univ. Ceylon '69, Bridgeport
Seneviratne, U. E., Univ. Ceylon '67, Hartford
Senn, M. J. E., Wisconsin '27, New Haven
*Sennett, E. J., Vermont '43, Hartford
Serafini, F. F., Univ. Bologna '70, Hartford
Serbin, A. F., Rush '33, Hartford
*Sereda, L. E., Toronto '53, Bloomfield
*Serena, F. A., Hahnemann '40, Norwalk
Serena, J. M., Hahnemann '41, Norwalk
Sereny, P., Albert Einstein '72, West Hartford
Serrell, H. P., Cornell '39, Greenwich
Shaban, S.S., Ohio St. Un. '73, Hamden
*Shafer, M. E., Pennsylvania '50, Hartford
Shafi, I., King Edward Med. Coll. '61, New Britain
*Shafto, W. A., Edinburgh '60, Danbury
Shah, A.K., N.H.L., Municipal Med. Coll '71, Derby
Shah, D.S., Topiwala Nat'l Med. Coll. (India) '72, Tolland
Shah, J.R.C., G.S. Medical '63, New London
*Shah, S. M., Seth G. S. Med. Coll. '67, Norwalk
Shah, S. M., T.N.M. Coll. India '63, Hartford
*Shah, S.O., J.N. Med. Coll. India '71, Bridgeport
Shah, U. C., Grant Med. Coll. '50, Bridgeport
*Shah, V.S., Med. Coll. Baroda, India '69, Bridgeport
*Shakibai, A., Tehran Un. '65, Manchester
Shanahan, S. A., Med. Coll. Pennsylvania '69, Greenwich
*Shanley, W. T., N. Y. Med. Coll. '61, Bridgeport
*Shapiro, B. S., Buffalo '57, Ansonia
*Shapiro, D., N. Y. Med. Coll. '71, Bethel
Shapiro, H. I., Chicago '63, Westport
Shapiro, H. O., Alabama '63, Vernon
Shapiro, H. R., S. U. N. Y. '69, Hartford
Shapiro, J. R., Cincinnati '74, Westport
Shapiro, M. M., S. U. N. Y. '67, Waterbury
*Shapiro, R., Pennsylvania '39, New Haven
Shapiro, R. L., N. Y. Med. Coll. '61, Hartford
*Shapter, R. K., Dalhousie Univ. '58, Middletown
Sharian, K. E., Teheran Un. '57, Waterbury
*Sharon, H. J., Berne '58, New Britain
*Sharon, M. R., Seton Hall '62, Rockville
Shaw, G. L., N. J. College Medicine '68, East Lyme
Shaw, J., Case Western Reserve '68, Hartford
Shaw, K. A., Un. St. Tomas '65, Greenwich
*Shaw, L. E., Wom. Med. Coll. Pa. '22, New Preston (Fairfield County)
Shea, J. P., N. Y. U. '46, Bridgeport
*Shea, M. S., Vermont '21, New Haven
*Shea, V. T., Tufts '31, Waterbury
*Shea, V. T., Jr., Nat'l. Un. Ireland '65, Waterbury
*Shea, W. P. III, Royal College, P & S, Ireland '71, West Hartford
*Shealy, A. C., Boston '58, Waterbury
*Sheard, C., Toronto '39, Stamford
*Shearer, J. K., Albany '43, Waterbury
Sheehan, B. F., Indiana '66, Old Saybrook
*Sheehan, F. G., Queen's Univ. Belfast '55, Middletown
Sheehan, G. D., Un. Coll. Dublin '65, Hartford
Sheehan, J. E., Long Island '47, Ridgefield
*Sheftell, F. D., N. Y. Med. Coll. '66, Stamford
Sheiman, R. A., Michigan '64, Bridgeport
Sheiman, S. C., Michigan '40, Bridgeport
*Shelling, R. L., Boston '56, Milford
*Shelton, P. A., N. Y. Univ. '57, West Hartford
Shenker, B. M., N. Y. Med. Coll. '38, Middletown
Shepard, W. M., Columbia '29, Putnam
Sherlip, B. J., N. Y. Med. Coll. '55, Trumbull
*Sherman, B., George Washington '29, N. Indialantic, Florida (Middlesex County)
*Sherman, I, J., Johns Hopkins '40, Bridgeport
Sherman, J. A., Chicago '67, Waterbury
Sherman, R.B., Yale '58, Winsted
Sherman, S. H., Columbia '34, Santa Fe, New Mexico (Fairfield County)
*Sherman, S. H., Cornell '32, Simsbury
Sherman, W. T., N. Y. U. '60, Danbury
Sherpick, W. E., Columbia '48, Farmington
Sherrington, H. J., Nat'l. Un. Mexico '63, Stamford
*Sherwood, H., N. Y. Med. Coll. '37, Middletown
*Sherwood, P. M., Boston '42, Hartford
Shield, D. E., Yale '70, Norwalk
Shiffman, I., St. Univ. New York '59, Meriden
Shiller, J. G., Columbia '52, Westport
Shimelman, N. M., McGill '67, New Haven
*Shimkin, P. M., Pennsylvania '65, Bridgeport
*Sholler, N. A., Hahnemann '43, Bridgeport
Shonk, Carl R., New Haven
*Shoukimas, J., Harvard '42, Hartford
*Shoup, H. B., Jr., Indiana '35, Westport
Shukan, D.C., Chicago '63, Longmeadow, Mass (Hartford County)
*Shull, J. C., Harvard '36, Simsbury
*Shure, A. L., Tufts '27, Hamden
Shutkin, N. M., Northwestern '37, New Haven
*Shutkin, P. M., Cornell '60, New Canaan
Sibrack, L.A., Un. Michigan '74, Branford (Fairfield County)
*Sica, V. F., Louvain '57, Bridgeport
*Sicklick, E., Geneva '51, Hartford
*Siderides, C. I., Athens '52, Stamford
*Siderides, L. E., Athens '52, Stamford
*Siefert, F. E., N. Y. Med. '60, Old Greenwich
Siegel, B. S., Cornell '57, New Haven

Siegel, K. C., Meharry Med. '69, Bridgeport
Siggins, L. D., Univ. Melbourne, Australia '59, New Haven
Sigman, R. L., Harvard '66, Hartford
Sikand, R. S., King Edward, Punjab '46, New Haven
Sikand, S. D., Punjab '49, Willimantic
*Siker, E., Women's Med. Pa. '43, Hartford
Sikorski, J. J., Basel '57, Derby
Silberberg, W. P., Duke '70, Ansonia
Silberman, C. G., Jefferson '50, Westport
*Silberstein, A. B., Downstate Med. Coll. '62, Middletown
*Silberstein, M. H., Berne '55, New Haven
Silk, M. R., N. Y. M. S. '62, Hartford
*Silliman, W. B., Jefferson '46, Windsor
Sillman, E., Columbia '48, Meriden
Silva, H. R., San-Marcos Un. '62, New Haven
Silver, H., Buffalo '57, Hartford
Silver, S. E., Columbia '62, New London
*Silverbach, S., Albany '70, Enfield (Tolland County)
*Silverberg, S. J., Columbia '21, New Haven
Silverman, C. K., Albert Einstein '72, Wilton
Silverman, D. R., St. Louis '63, Bridgeport
Silverman, J. P., N. Y. U. '65, New Haven
*Silverman, N. R., N. Y. U. '64, Derby
Silverman, S. M., St. Univ. Ghent, Belgium '72, Farmington
*Silverstein, D. M., Wayne State '59, Derby
Silverstein, H. R., Ohio State '65, Hartford
*Silverstone, D. E., N. Y. Med. Coll. '73, New Haven
*Silvert, D. S., Manitoba '52, Danbury
Simkovitz, J., Havana '53, Bridgeport
*Simon, H. J., Colorado '43, Waco, Texas (Fairfield County)
Simon, L. G., N. Y. U. '27, Norwalk
Simonds, B.D., Cornell '67, New Haven
Simonds, J. R., Vermont '38, Washington Depot
Simonelli, J. M., Bologna '58, Danbury
Simpson, J. A., Georgetown '60, Bridgeport
*Simses, J. P., Tufts '37, Bridgeport
*Simses, J. P., Jr., Tufts '69, Bridgeport
*Sinatra, S. T., Albany '72, Manchester
Sindwani, D. R., A. I. I. M. S., India, Stafford Springs
Singer, B., N. Y. Med. Coll. '61, Norwalk
*Singer, J. B., Yale '66, Westport
Sinnamon, R. C., Penn. '68, Durham
*Sinton, W. A., Boston '46, Danbury
Sires, W. O., Maryland '50, Fairfield
*Sirica, A. E., Johns Hopkins '26, Waterbury
*Sirkin, R. B., Harvard '55, New Britain
*Sirop, P. A., Brussels '58, Waterbury
*Sirot, G., State Univ. of N. Y. '51, New Haven
Sirota, H. H., Cambridge '37, East Hartford
*Sittambalam, E. J., Ceylon '69, New Britain
*Sivak, D. M., Univ. Louisville '69, Westport
Sivaloganathan, S., Un. Ceylon '67, Waterbury
*Sivanesan, P., Univ. Ceylon '69, Bridgeport
Sklaire, M. W., N. Y. U. '60, Madison
*Sklaver, J., Michigan '37, Waterbury
*Skluth, L. H., N. Y. U. '36, Norwalk
Skolnick, S. R., Univ. Heidelberg '69, Darien
*Skreczko, C. K., Jefferson '37, New Haven
Slater, D., N. Y. Med. Coll. '40, Hamden
Slater, G., Vienna '38, Stamford
*Slater, G. S., N. Y. Med. Coll. '44, New Britain
*Slater, J. A., N. Y. Med. Coll. '71, New Canaan
*Slater, M., Yale '24, Hamden
Slavin, J. D., Jr., Yale '66, Hartford
Slepian, J. Z., Bologna '68, Derby
Slossberg, D. S., Tufts '34, Bloomfield
*Slover, W. P., Jr., Boston '60, Hartford
*Slysz, L. B., Boston '27, New Britain
Small, A. R., N. Y. Med. Coll. '48, Bridgeport
Small, J. H., New York '54, Bridgeport
*Smeraldi, R. A., Ottawa '59, Stamford
*Smiley, S. S., St. Un. New York '59, Ansonia
Smith, D. B., Yale '58, Wallingford
*Smith, D. H., Syracuse '53, Manchester
*Smith, F. E., Jr., Columbia '34, Salisbury
Smith, F. F., Howard '30, New Haven
Smith, G. W., Pittsburgh '69, Cheshire
*Smith, H. W., Yale '53, New Haven
*Smith, J. A., Western Reserve '35, Waterbury
Smith, J. D., Lausanne '62, West Hartford
*Smith, J. J., Maryland '30, Easton
*Smith, J. R. V., Pittsburgh '60, Hartford
*Smith, J. T., Long Island '41, Torrington
Smith, L. A., Albany '43, West Hartford
*Smith, L. K., Univ. of Rochester '44, Hartford
*Smith, L. M., Tufts '37, Stamford
Smith, N. E., Jr., Med. Coll. Virginia '66, Winsted
*Smith, O.L.K., Yale '53, New Haven
Smith, R.A., Albany Med. Coll. '72, Meriden
*Smith, R. D., McGill '54, Torrington
Smith, R. P., Harvard '43A, Branford
*Smith, S. G., Rochester '62, Manchester
*Smith, W. F., Cornell '34, West Hartford
Smith, W. L., Columbia '37, Hartford
Smolen, E. M., N. Y. U. '44, Fairfield
Smolen, R. L., N. Y. U. '50, Fairfield
*Snoke, A. W., Stamford '33, Hamden
*Snow, B., Tufts '57, New Haven
*Snurkowski, C. V., Georgetown '25, New Haven
Snyder, E. W., P & S '58, Deep River
Snyder, G.G., III., Temple Univ. '64, Farmington
*Snyder, H. L., Chicago '54, Manchester
*Snyder, R. E., Indiana '72, Norwich
Snyder, R.P., Chicago Coll. Osteopathic Med. '70, Putnam
Soares, M. J., N. Y. Med. Coll. '57, Hartford
Sobin, B. A., S. U. N. Y. '70, Manchester
Sohn, C.S., Catholic Med. Coll. '66, Southington
*Sokhos, D. R., Nat'l. Un. Athens '48, North Haven
Solano, H., Nat'l. Un. Mexico '66, New Britain
*Soletsky, H. B., N. Y. U. '62, Brookfield
Solin, M. E., Yale '73, Old Lyme
Sollosy, A., Tufts '27, Pompano Beach, Florida (Fairfield County)
Solomon, M., Michigan '56, Norwich
*Solomon, R. Z., Yale '39, Hartford
Solter, A. W., Yale '72, Middletown
Solway, R. I., Toronto '40, Westport
*Somogyi, B. B., S.U.N.Y. '65, Southington
Son, Y. H., Seoul Nat'l. Un. '50, New Haven
*Song, S., Korea '62, Manchester
Songco, M. F., Philippines '54, Norwich
*Sonido, R.A., Un. Santo Tomas '64, Newtown
Sonnen, V. G., Basel '46, Enfield (Tolland County)
*Soreff, L., Tufts '32, East Hampton
Sorge, D. V., St. Louis '59, Bridgeport
*Soriano, E. R., Philippines '52, Groton
Sornberger, C. F., Syracuse '40, Hampton
*Soroka, A., Univ. of Louvain, '75, Hartford
*Sosa, J. B., Santo Domingo '59, Middletown
*Southwick, W. O., Nebraska '47, New Haven
Souvlis, C. D., Nat'l. Athens '47, Bridgeport
Spada, D. L., Un. Vermont '73, Simsbury
*Spalding, P. E., London Univ. '53, Portland
Spannaus, F. C., Jr., N. Y. U. '45, Roxbury (Fairfield County)
*Spar, I.L. George Washington '68, New Britain
*Sparks, F.C., Northwestern '64, Farmington
*Spector, N., Tufts '24, Willimantic
*Speer, C. S., Hahnemann '55, Hartford
*Speight, H. E., Georgetown '27, Middletown
*Spekter, L., Rochester '33, West Hartford
*Spencer, J. A. E., Yale '62, Greenwich
*Spencer, L. O., Tulane '26, Myrtle Beach, South Carolina (New Haven County)
*Spencer, S., Georgetown '39, Fairfield
*Sperling, D.A., Rush Med. Coll. '74, Hartford

°Speth, C. P., Heidelberg '68, Turlock, California (Fairfield County)
Spignesi, J. T., Georgetown '30, Wallingford
°Spillane, R. J., Washington '43, Hartford
°Spinelli, N. P. R., Yale '44, Devon (Fairfield County)
°Spinner, S., Tufts '35, New Haven
Spiro, H. M., Harvard '47, New Haven
°Spitz, H., Yale '43, New London
Spitz, J.B., Univ. of Bologna '72, Hartford
Sponzo, J. J., Tufts '38, Hartford
°Sprafke, D.F., Georgetown '63, New London
°Sprecace, G.A., State Univ. New York '57, New London
Springer, G.L., Yale '68, Norwich
Springer, T.D., Indiana '69, Hartford
Sproul, L.E., Harvard '58, Mystic
°Squattrito, U., Palmero '52, Darien
°Squillacote, V.J., Rome '34, New Britain
°Sreenivas, V.I., Govt. Med. Coll. Mysore '61, Orange
Srinivas R.R., Prince of Wales '63, Waterford
°Srinivasan, J.P., Christian Med. Coll., India '64, Bloomfield
Stabinksy, C., New York '55, Norwalk
°Stack, W.J., N.Y., Med. Coll. '48, Hartford
Staffieri, S. Naples '44, Danbury
Stahl, A.J., Un. Louvain '71, Waterbury
Stallworth, V.M., Meharry '59, Bridgeport
Stanberry, M.C., Univ. Arizona '64, Lyme
°Stanard, J.E., Syracuse '43, Waterbury
°Standish, E.M., Harvard '22, West Hartford
°Standish, H.C., Cornell '28, West Hartford
°Standish, W.A., Yale '25, Avon
°Stanford, J., Harvard '51, Essex
°Stankard, W. F., Jefferson '38, Stamford
Stanton, R. A., Physicians & Surgeons '72, Bridgeport
Stanton, R. E., Boston '55, Manchester
Stapor, J. J., Long Island '47, Orange (Hartford County)
°Starr, R. M., Yale '26, Quaker Hill
°Stathacos, E. J., North Carolina '57, Fairfield
°Staub, E. M., Albany '72, Fairfield
°Stavola, J. J., New York '56, Hartford
°Stearns, C. S., Yale '46, East Hartford
°Steckler, J. B., St. Un. New York '66, New Britain
°Steege, T. W., Yale '38, Hartford
°Steglich, C. P., Univ. Columbia '48, Stamford
Stein, M. L., N. Y. Univ. Coll. Med. '59, Milford
°Stein, S. A., Harvard '67, New Haven
Stein, S., Albert Einstein '66, Waterbury
Stein, S. C., Un. Virginia '56, New London
Steinberg, D. H., St. Univ. New York '59, Stamford
Steinberg, H., N. Y. Med. '54, Westport
Steinberg, M. G., N. Y. U. '68, Stamford
Steinberger, L., Royal Hungarian Eliz, '37, Norwalk
°Steincrohn, P. J., Maryland '23, Coral Cables, Florida (Hartford County)
Steller, R. E., Temple '53, Stamford
Stember, R. H., N. Y. U. '59, Norwalk
Stent, P. A., Georgetown '54, Norwalk
Stepanek, H.F., Jr., Univ. Guadalajara '73, New Haven
Stephenson, J.H., Cornell '51, Fairfield
Steremberg, Z., San Marcos Un. '63, Bridgeport
°Sterling, A. P., S.U.N.Y. '67, Waterbury
°Stern, H., Tufts '52, New Haven
Stern, P. G., Med. Coll. Virginia '69, Bloomfield
Stern, R., Western Reserve Univ. '66, New Haven
°Stern, S., Univ. of New York '57, New Haven
°Sterrett, R. A., Cornell '39, Southport
°Stetson, H. P., Boston '41, Southington
Stetson, H. W., Vermont '06, Milford
Steven, R. J., London Hospital '43, Hartford
Stevens, T. J., S.U.N.Y. '67, Hartford
°Stewart, L. Q., Yale '33, South Yarmouth, Mass. (Hartford County)
°Stewart, W. E. L., Albany '52, New Britain
°Stier, S.A., Temple '70, New Britain
°Stier, S.A., Temple '70, New Britain
°Stier, S. D., N. Y. Med. '61, Derby
°Stietzel, E. E., Columbia '34, Norwalk
Stiff, D. P., Michigan '56, Bridgeport
°Stilson, C., Yale '42, New Haven
Stitleman, M., Albert Einstein '66, Branford
°Stoane, L., Downstate Med. Ctr. '60, Middletown
°Stocking, A. G., Long Island '46, Waterbury
Stockwell, R. M., Tufts '56, Farmington
Stone, E. L., Albert Einstein '70, New Haven
Storch, M.P., Un. Autonoma, Guadalajara, Mexico '72, Westport
°Storms, W. F., Harvard '30, Wethersfield
°Stotts, H. L., Un. Washington '52, Bridgeport
Stoughton, P. V., McGill '53, Hartford
°Stovell, P. B., Columbia '68, Norwalk
°Straub, J. J., Iowa '72, Hartford
°Strauch, G. O., Michigan '57, Stamford
Strayer, L. M., Jr., Harvard '30, Lancaster, New Hampshire (Fairfield County)
Strazek, L. M., Wroclaw '60, Wallingford
°Street, J. M., Duke '42, New Milford
Streeto, J. M., Pennsylvania '60, Hartford
Strothers, G., Middlesex Hosp. England '64, New Haven
°Stroup, R. F., Rochester '65, New Haven
°Stubblefield, R. L., Univ. Texas '42, New Canaan
Stubenhaus, J. H., N. Y. Med. Coll. '47, Fairfield
Stuermer, V. M., Nebraska '48, New Haven
°Sturman, R. H., Yale '50, Waterbury
Suchenski, M. N., St. Louis Univ. '62, Darien
Suerig, K. C., New York-Bellevue '61, Cos Cob
Suesserman, H. I., George Washington Univ. '64, New Haven
Sulick, E. J., Georgetown '54, Manchester
°Sullivan, A. F., Jefferson '42, Waterbury
Sullivan, B. E., Georgetown '57, Bridgeport
°Sullivan, J. J., Jr., Tufts '55, Stamford
°Sullivan, J. L., Yale '51, Bridgeport
Sullivan, K.P., Georgetown '70, Hartford
Sullivan, P. R. C., Tufts '66, Hartford
Sullivan, R. E., Georgetown '63, Waterbury
°Sullivan, R. M., Tufts '59, East Hartford
°Sullivan, W. M., New York '54, Norwalk
Sulman, M., Columbia '36, New London
°Sultar, R. S., State Univ. N. Y. '57, Kensington
Sulzycki, M. M., Georgetown '43, Bridgeport
°Summa, J. F., New York Med. Coll. '58, Waterbury
°Sumner, M. L., N. Y. Med. Coll. '47, New Haven
Sumner, P. E., Tufts '55, Manchester
°Sunderman, F. W., Jr., Jefferson '55, Farmington
°Sundquist, A. B., Tufts '33, Manchester
Sunkin, D. F., N. Y. U. '42, Bloomfield
Suplicki, J. W., Tufts '26, Norwich
°Sussler, D., Fordham '16, Palm Beach, Florida (New London County)
Sutphen, J. H., Ohio State '65, New London
Suttenfield, V., Georgia '44, Stamford
°Sutton, P., Vienna '36, Groton
°Svedlow, B. D., George Washington '41, Stamford
Swain, E. B., Cornell '51, Hartford
Swain, B. R,. Cornell '43, New Haven
Swan, P.F., Un. Coll. Dublin '58, Hartford
°Swarts, W. B., Pennsylvania '34, Greenwich
Swartz, A. N., Universad del Valle, Columbia '73, West Hartford
°Swartz, G. J., Ottawa '65, New Britain
Sweet, E. B., Virginia '50, Hartford
°Sweet, R. T., State Univ. N. Y. '52, Middletown
Swett, N. P., N. Y. U. '46, Hartford
°Swift, W. E., Columbia '40, New Haven
°Sylvan, R. L., S.U.N.Y. Buffalo '72, Hartford
Sylvester, S.R., Northwestern '74, Unionville
°Syz, H., Geneva '21, Westport
Tadeo- Goldman, J. A., Santo Tomas '53, West Hartford
°Taffel, M., Yale '31, Woodbridge

*Tager, M. G, N. Y. Med. Coll. '58, Norwalk
Tai, R., Dow Medical College '66, Stamford
*Takata, H. Kobe Med. '65, Hartford
*Talbot, H. P., Maryland '27, Venice, Florida (Hartford County)
Tandon, K. N., Maulana Azad '66, East Hartford
Tan, D. L., Univ. of Groningen '57, Meriden (New London County)
Tan, F. S., Airlangga Un. Med. Sch. '59, Manchester
Tan, J. M., Santo Tomas '67, Fairfield
Tate, C. E., Kansas '70, Watertown
Taub, A., Yale '57, New Haven
Taube, S. L., Pittsburgh '67, Waterbury
*Taubin, H. L., Un. Virginia '65, Bridgeport
*Taylor, C.R., Aberdeen '64, Waterford
*Taylor, D. M., N. Y. U. '47, New Britain
Taylor, K. S., Arkansas '61, Norwich
Taylor, M. J., Columbia '63, Southbury
*Taylor, P. T., Temple '62, Hartford
*Taylor, R. F., Ohio '58, Glastonbury
*Taylor, R. M., George Washington '22, Branford
Taylor, R. N., Jr., Un. Virginia '73, Watertown (New Haven County)
*Taylor, R. N., Yale '30, New London
*Taylor, S. P., George Washington '16, North Haven
Taylor, T. J., Royal College of Surgeons '71, Woodbury (Tolland County)
Taylor, W. R., Columbia '60, West Hartford
*Tec, L., St. Joseph's '44, Westport
Teeking, P. S. T., Santo Tomas '60, Waterbury
Tehrani, H. L., Tehran '62, Manchester
*Teiger, P., Columbia '39, Waterbury
*Tella, R. T., Tufts '45, Stamford
*Tennant, R., Yale '29, West Hartford
*Terhune, W. B., Tulane '15, New Canaan
terKuile, R. C., Rochester '32, Lebanon, Illinois (Fairfield County)
Tesoro, M. R., New York Med. Coll. '67, Sharon
Thaw, B. D., George Washington '48, Hartford
*Thayer, J. E., Vermont '43, Hartford
*Thayer, R. B., Jr., Yale '46, New Haven (Tolland County)
*Thomas, A. H., Duke '42, Manchester
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Thomas, E. J., Cornell Med. College '70, Old Saybrook
Thomas, J. B., Harvard '52, Hartford
Thomas, J. M., New York Un. '59, East Hampton
*Thomas, R. J., Temple '56, New Britain
*Thompson, H. G., Jr., Cornell '50, Farmington
*Thompson, M. B., Columbia '31, Orange
*Thomson, A. W., Jr., Cornell '43, Middletown
*Thornton, G. F., Boston '59, Waterbury
Thumin, M., Maryland '33, Middletown
*Thurmond, J. E., Tennessee '47, Bridgeport
Tidhar, I., Albert Ludwig's '65, Bridgeport
*Tiedemann, R. N., New Jersey '65, Sharon
*Tierney, J. W., Vermont '48, Milford
*Tierney, L. M., Maryland '36, West Haven
*Tietjen, R., N.Y.U. '72, Danbury
*Tighe, J. A., Lausanne '56, New London
Timmerman, D.D., Univ. Rochester '74, Middletown
Timpson, R.H., Howard Univ. '51, New Haven
*Tirella, F. F., Tufts '37, Bristol
Tjimis, P. D., Athens '58, Hamden
Tobi, L. G., Utrecht '31, Loudon, New Hampshire (Windham County)
*Tobin, J. J., N. Y. Med. Coll. '60, Darien
Toffler, R. B., Albert Einstein '64, Waterbury
Toffolon, E. P., Tufts '69, Kensington
*Tofig, R., Geneva '53, New Haven
Toledo, A.C., Far Eastern Univ. '69, New London
*Toll, N., Charles Univ., Prague '27, Middletown
*Tomaino, F. F., Yale '29, Danbury
*Tomaino, P., Messina-Italy '51, Danbury
*Tonken, L. C., Tufts '34, Hartford
*Tonkonow, F. H., Boston '49, Meriden
*Toole, A. L., Physicians and Surgeons '58, New Haven
*Toor, A.A.A., King Edward Med. Coll. '61, New Britain
Toor, N. F., King Edw. Med. Coll. '61, New Britain
*Tormo, V,. Valencia '50, Waterbury
*Torop, P., Harvard '66, Middletown
Torres, C. B., Sto. Tomas '53, Norwich
Torstenson, G. E., Albany '66, Bridgeport
*Tortora, F., Rome '40, New Haven
Tortora, M. J., Bologna, Italy '69, Hartford
*Townsend, G. L., Yale '66, Danbury
*Tracey, E. J., N. Y. Med. Coll. '58, Norwalk
Tracey, J. P., Pennsylvania '63, Norwalk
*Tracy, F. E., Yale '29, Middletown
*Trambert, H. L., N. Y. Med. Coll. '42, Norwalk
*Tramontozzi, A. D., Columbia '55, Norwich
*Trantolo, A., Tufts '39, East Hartford
*Trapp, F. W., Georgetown '36, New Britain
*Traurig, A. R., Wayne State Univ. '58, Waterbury
Trautman, E. F., Temple '40, Trumbull
Treder, F. H., Vermont '46, Woodbridge
*Trench, J. M., Maryland '47, Hartford
*Trent, J. W., Med. Coll. Virginia '51, Stamford
*Trent, S. C., Yale '43, Meriden
Tricarico, V.J., Med. Coll. Virginia '74, Wilton
*Trifari, L. M., Tufts '42, Hamden
*Trimpert, A. J., Georgetown '33, Bethel
*Tripp, W. H., Emory Univ. '51, Hartford
*Troncale, F. J., Tulane '62, New Haven
*Trowbridge, P. E., Tufts '59, Hartford
*Troy, W. D., Jefferson '36, Stamford
*Truax, H. N., Vermont '57, Norwalk
Tsai, D. C. C., Taipei Med. Coll., Taiwan '70, New Haven
Tse, Y., Sun Yat-sen Med. Coll. China '43, Westport
*Tucker, C. A., Tufts '38, Hartford
Tucker, E. M., Columbia '52, Springfield, Mass. (Fairfield County)
Tucker, E. S., Tulane '66, Essex
Tucker, J. S., Minnesota '48, Hartford
Tuerk, B., Jr., Long Island '48, Woodbury
Tummillo, M. A., Woman's Med. Coll. Penna. '56, Windsor
Tumminello, V. J., Tufts '68, Stafford Springs
*Tunick, G. L., Jefferson '35, Greenwich
Turano, A. F., N. Y. U. '51, Middletown
Turco, V. J., Tufts '41, Hartford
Turek, A. J., Syracuse '51, Manchester
Turetsky, S., Baylor '36, Bridgeport
Turkalo, J. K., Louvain '50, New Haven
*Turner, W. W., Yale '48, Wethersfield
Tury, L. A., Budapest '37, Winsted
Tutles, A. J., Tufts '30, Melbourne Beach, Florida (Hartford County)
Tuttle, M. Marlborough
*Twachtman, E., Virginia '36, Essex
Twaddle, P. H., Yale '55, Wethersfield
Twersky, J. M., Tufts '59, Fairfield
Twiss, H. Y., Georgetown '34, Middletown
*Tylec, L. L., Virginia '35, Naugatuck
Tyrrell, D. P., Wayne St. '57, Hartford
Ubogy, G. A., N. Y. U. '62, Greenwich
Ulreich, S., Downstate '70, New Britain
*Ungar, J. I., Hahnemann '63, Bloomfield
*Unger, M., Hahnemann '37, Bridgeport
*Upton, E. F., George Washington '50, Danbury
Uricchio, J. G., Georgetown '31, Hartford
Usman, A., Osmania Univ. '58, Stamford
*Uvitsky, I. H., Boston '27, Bridgeport
Vacek, W. J., S.U.N.Y. '69, Glastonbury
*Vahidy, M.M., Liaquat Med. Coll. Pakistan '67, Meriden
*Valentine, B. R., Cornell '43, Abington

°Valentine, G. W., N. Y. Med. Coll. '55, Waterbury
Vallone, A. J., Creighton '65, Bridgeport
°Vance, J. A., III, Virginia '54, Hartford
Van de Berghe, R., Ghent '58, Fairfield
Van Der Aue, G. L., Pennsylvania '66, Bridgeport
van der Veen, T., Amsterdam '49, Bridgeport
Van Der Werff, J. A., Leiden '54, Hartford
VanDerwerker, E. E., Jr., Temple '49, Southbury
°van Dyk, A. R., Amsterdam '38, Washington D.C. (New London County)
°Van Eck, W. F., Amsterdam '35, East Haven
°Van Kleeck, E., Columbia '12, West Hartford
Van Nes, W.G., Case Western Reserve '68, Chester
°Vanoni, F. R., Jefferson '58, Torrington
Van Poznak, F., Columbia '50, London England (Fairfield County)
°Van Syckle, G. W., Cornell '48, Danbury
Varrone, J. C., Michigan '35, New Haven
°Vecchiolla, J. A., Columbia '54, Bloomfield
°Veeder, R., Durham '52, Hartford
°Vegliante, M. E., Tufts '27, New Haven
°Veiga, A. S., Coimbra '48, Waterbury
Velez, E.M., Univ. of Sto. Tomas, '66, Hartford
Velie, W. M., McGill '56, Windsor
Veneruso, C., Georgetown '55, Trumbull
°Ventimiglia, J. J., N. Y. Med. Coll. '52, Orange
°Verie, K. E., Tufts '44, New London
°Vermande, G. J., Amsterdam '39, East Haven
°Vernlund, R. J., Vermont '45, Hartford
°Vernon, S., Long Island '30, Willimantic
°Verstandig, C. C., Tennessee '39, Hamden
°Vetter, I. J., Long Island '47, Norwalk
Vickerman, R.L., Univ. Iowa '67, East Lyme
°Vidone, R. A., Yale '57, Orange
Vigna, V., Un. Bari-Italy '51, Norwalk
Vileisis, V., Vermont '50, Woodbury (New Haven County)
Villa, A., Antioquia '64, Prospect
Villa, A. D. P., Santo Tomas '69, Stafford Springs
Villaluz, E. S., St. Tomas '60, Waterbury
Villaluz, J. R., Jrs. St. Tomas '60, Waterbury
Villar, R. L., St. Tomas '57, Waterbury
Vincent, N. R., British Columbia '61, Bridgeport
°Vinci, V. J., N. Y. U. '39, Middletown
°Vincitorio, J. A., Seton Hall '62, Waterbury
Viner, N. A., Vanderbilt '68, Bridgeport
Vinnick, L., Jefferson '60, Stamford
°Vioni, R. E., Naples '35, Bridgeport
Vinauskas, J. W., Univ. Coll. Galway '57, New Britain
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°Vogel, R. M., Harvard '60, Orange
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Vollero, A., Tufts '30, New Haven
Volpintesta, E. J., Un. Mexico '71, Bethel
°von Gal, H. V., Long Island '44, Greenwich
°Voss, H. E., N. Y. U. '61, Stamford
Wachsman, H. F., Chicago '62, Sandy Hook
°Wade, P. B., Tufts '52, New London
Wagenbrenner, W.J., Munich '63, New Milford
Wagner, F.C., Jr., Bowman Gray '66, New Haven
°Wagshul, E. C., Tufts '55, Meriden
Wahba, H. S., Cairo '65, Norwich
Wakeman, E. M., Pennsylvania '56, Guilford
°Wakeman, E. T., Yale '22, New Haven
Waldemar-Kertesz, J., Vienna '26, Hamden
°Walden, R. C., Jr., Pennsylvania '42, Manchester
°Waldman, A. L., N.Y.U. '60, Cromwell
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°Waldon, S. L., Tufts '50, Thompson
Walker, D. A., Tufts '38, Rocky Hill
Walker, G. I., Jr., Tulane '42, New York, New York (Fairfield County)
Walker, H. C., Howard '55, South Norwalk
Walker, J. E. C., Pennsylvania '53, Farmington
°Walker, R. Rochester '37, West Hartford
°Walker, T. H., N. Y. Med. '50, Torrington
Wallace, E. P., Harvard '44, Meriden
°Wallach, G. M. K., Bern '39, Waterbury
°Walsh, F. X., N. Y. Med. Coll. '67, Greenwich
°Walsh, J. F., III, N. Y. U. '48, Bridgeport
°Walsh, T. J., Bowman Gray '58, Stamford
Walshe, T. E., Cork, Ireland '59, Wolcott
°Waltman, I., Yale '41, Hartford
°Walton, L. L., Johns Hopkins '33, Hartford
°Walzer, E. H., N. Y. U. '40, Bridgeport
Wand, M., Yale '68, Hartford
Wandersee, E. P., New York State '56, Mansfield Depot
Wang, P. H., Taipei Med. Coll. '68, Milford
Ward, F. P., N. Y. Med. Coll. '52, Norwich
Ward, J. P., Georgetown '36, Bridgeport
Ward, K. E., Harvard '44, Hartford
°Wardner, L. H., Cornell '34, Hartford
Warner, A., Johns Hopkins '58, Hartford
°Warner, C. N., Jr., Tufts '36, Litchfield
°Warnshuis, L. C., Edinburgh '11, New London
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°Warren, D. L., Tufts '48, Norfolk, Virginia (Hartford County)
°Warren, P., State Univ. N. Y. '53, Waterbury
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°Wasilauskas, V. P., George Washington Un. '70, Waterbury
Waskowitz, W. J., Yale '57, New Britain
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°Wasson, D., Queen's Univ. '57, Bridgeport
°Waterman, W. B., Columbia '44, Hartford
°Watson, H. K., George Washington '60, Hartford
°Watson, J. E., Ohio St. '68, Norwich
Watstein, G. J., Albert Einstein '64, New Haven
°Waugh, D. D., Columbia '33, Sharon
°Waugh, R. E., Yale '59, New Britain
Wawro, N. W., Yale '38, Hartford
Waxberg, J. D., George Washington '48, Stamford
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°Webber, T. G., N. Y. Med. Coll. '73, Stamford
°Weber, F. C., Jr., Johns Hopkins '36, Greenwich
°Weed, C. B., N. Y. Med. Coll. '47, Stamford
°Weeks, C. Jr., Virginia '53, Sharon
Weglarz, S. S., Harvard '59, Bridgeport
°Wehger, R. T., Yale '32, Trumbull
Wehr, R., Munich '54, Windsor Locks
°Wehrli, A., Univ. Zurich '46, New Britain
Weicholz, S., Louvain '64, Fairfield
°Weigel, S. J., Yale '43, Danielson
°Weil, U. H., Heidelberg '51, New Haven
Weinberger, N. J., Pittsburgh '66, Norwalk
°Weiner, J., Johns Hopkins '20, New Haven
Weiner, J., Pennsylvania '59, Danbury
°Weiner, S., Columbia '35, Hartford
Weinstein, A., Boston '58, Bridgeport
°Weinstein, A. H., Jefferson '60, Norwalk
°Weinstein, A. H., Albany '66, Bridgeport
°Weinstein, M.H., Univ. Rochester '69, New Haven
Weinstein, N., Trinity (Dublin) '34, Norwalk
Weinstein, N., Boston '53, Bridgeport
Weinstein, P. L., Chicago '70, Stamford
Weinstein, S. L., Chicago '66, Norwalk
°Weisberg, H. E., Penn. '48, Waterbury
°Weise, E. C., Jr., jefferson '47, Bridgeport
Weisel, A., Vermont '59, Stamford
Weisenfeld, N., Maryland '28, Sarasota, Florida (Hartford County)

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*Weissenborn, W., Johns Hopkins '32, West Hartford
*Weitzman, H. A., Vermont '63, Fairfield
*Weitzner, A., Amsterdam '57, Stratford
*Welch, E. T., Jr., Cornell '49, West Hartford
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*Weld, S. B., Harvard '16, West Hartford
*Welhaven, A., Oslo '47, Hartford
Welling, S. K., Pennsylvania '55, Middletown
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Wells, J., Yale '37, West Hartford
Wells, J. B., Yale '40, Hartford
Wells, K. H., Temple '72, Hartford
Welna, J.A., Tufts '56, New Britain
*Weltman, R.B., Tufts '72, Hartford
Wener, W. V., McGill '27, Norwich
*Werner, H. J., Lausanne '62, Bloomfield
*Wesoly, A. S., Vermont '37, New Britain
Wessel, M. A., Yale '43, New Haven
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*West, H. F., Temple '48, Collinsville
*Westcott, J. L., State Univ. N. Y. '58, Hartford
*Weston, R. A., Jr., Harvard '41, Milford
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*Westsmith, R. A., Southern California '37, Lakeville
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*Wexler, H., Syracuse '31, New Haven
Wexler, R., N. Y. U. '50, Norwalk
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Chester, Mrs. Lewis L., Beech Tree Lane 06107
Cohn, Mrs. Samuel H., 15 Brainard Rd. 06117
Collias, Mrs. James, 16 Rillbank Terrace 06107
Conant, Mrs. Roger, 11 Sunrise Hill Dr. 06107
Conroy, Mrs. John T., 46 Sunrise Hill Dr. 06107
Conway, Mrs. Edward J., 24 Mountain Terrace Rd. 06107
Conway, Mrs. Mark, 28 Juniper La. 06117
Crombie, Mrs. H. David, 126 Hunter Dr. 06107
Curran, Mrs. Timothy L., 14 Baintree Dr. 06117

Dalton, Mrs. George R., 339 South Main 06107
D'Alotto, Mrs. John A., 47 Berwyn Rd. 06107
Daoud, Mrs. I.M., 127 Wilfred 06110
de Chabert-Ostland, Mrs. Jean C., 1582 Asylum Ave. 06117
DeMaio, Mrs. John, 71 Hunter Dr. 06107
Denne, Mrs. Thomas H., 30 Outlook Ave. 06119
Denton, Mrs. Cleveland R., 23 Greenridge Lane 06107
Dion, Mrs. Asa J., 60 Webster Hill Blvd. 06107
Dobrow, Mrs. Robert, 148 Pioneer Dr. 06117
Donnelly, Mrs. John, 14 Ledyard Rd. 06117
Donshik, Mrs. Peter C., 33 Montclair Dr. 06107
Dowling, Mrs. Kevin V., 36 Westmount 06117
Dushane, Mrs. Joseph E., 6 Highgate Lane 06107

Earle, Mrs. Lyon H., Jr., 16 Sunset Ter. 06107
Ehrlich, Mrs. Eugene L., 54 Lovelace Dr. 06117
Ellis, Mrs. William A., 79 Stoner Dr. 06107
Ergin, Mrs. Muceddit T., 97 Cliffmore Rd. 06107

Fazzari, Mrs. Patrick J., 11 Lakeview Drive 06117
Feldman, Mrs. Paul, 40 Colony Rd. 06117
Fenney, Mrs. Philip W., 95 Meadow Lane 06107
Fierberg, Mrs. A. Arthur, 53 Brightview Dr. 06117
Fishman, Mrs. Ronald S., 165 Beacon Hill Dr. 06117
Fleisch, Mrs. Milton C., 49 Sulgrave Rd. 06107
Flescher, Mrs. Robert, 40 Berwyn Rd. 06107
Foster, Mrs. Kendall, 41 Westminster Dr. 06107
Galen, Mrs. M.A., 21 Still Lane 06117
Geary, Mrs. Frederick L., 23 Sunset Ter. 06107
Gfeller, Mrs. Robert J., 16 Berwyn Rd. 06107
Giardi, Mrs. Leo P., 94 Richmond Lane 06117
Godar, Mrs. Thomas J., 72 Blue Ridge Lane 06117
Gold, Mrs. Bertram, 73 Vardon Rd. 06117
Goldberg, Mrs. Morton H., 33 Cumberland Rd. 06119
Goldenberg, Mrs. Philip T., 95 Brewster Rd. 06117
Goldstein, Mrs. Max R., 779 Prospect Ave. 06105
Golston, Mrs. Harry, Hampshire House, Apt. 3H 893 Farmington Ave. 06119
Gordon, Mrs. Yale, 65 Griswold Dr. 06119
Gorman, Mrs. David, 199 South Main 06107
Gould, Mrs. M. Martin, 15 Ridgewood Rd. 06107
Guillette, Mrs. William, 7 Winterset La. 06117
Graffagnino, Mrs. Paul N., 66 Uplands Dr. 06107
Grayson, Mrs. Donald R., 62 Westwood Rd. 06117
Grody, Mrs. Marvin H., 110 High Wood Rd. 06117
Gross, Mrs. Elliot, 58 Avondale Rd. 06117
Gross, Mrs. Norman D., 368 Fern 06119

Haksteen, Mrs. John J., 41 Middlebrook Rd. 06119
Hall, Mrs. Francis, 48 Stoner Dr. 06107
Halligan, Mrs. Thomas J., 104 Spring La. 06107
Hamilton, Mrs. George, 43 Sulgrave 06107
Hannan, Mrs. William S., 4 Squirrel Hill Lane 06107
Haugh, Mrs. John D., 50 Mohawk Dr. 06117
Henken, Mrs. E. Marvin, 57 Pilgrim Rd. 06117
Hickox, Mrs. Curtiss B., 30 Rosedale Rd. 06107
Himelstein, Mrs. Monroe, 10 Squirrel Hill Rd. 06107
Hochman, Mrs. Howard, 1841 Asylum Ave. 06117
Houlihan, Mrs. John J., 101 Montclair Dr. 06107
Hull, Mrs. Crawford, 58 Walton Dr. 06107
Hulme, Mrs. Stephen A., 7 Soby Dr. 06107

Jeresaty, Mrs. Robert M., 36 Lakeview Dr. 06117

Kaplan, Mrs. Bernard J., 63 High Wood Rd. 06117
Kardys, Mrs. John A., 49 Pilgrim Rd. 06117
Keefe, Mrs. Arthur D., 122 Richmond Lane 06117
Keefe, Mrs. William, 17 Walbridge Rd.
Kemler, Mrs. R. Leonard, 65 Norwood Rd. 06117
Klein, Mrs. Joseph, 779 Prospect Ave., Apt. 4 06105
Krall, Mrs. Irving H., 50 Pilgrim Rd. 06117
Krenicky, Mrs. Peter, 30 Borough Dr. 06117
Krieger, Mrs. James L., 23 Glen Hollow 06117
Kugelman, Mrs. Thomas P., 19 Sunset Ter. 06107

Laakso, Mrs. William B., 48 Woodridge Circle 06107
Lahey, Mrs. William J., 34 Montclair Dr. 06107
Lenehan, Mrs. J. Richard, 49 Rosedale Rd. 06107
Levy, Mrs. Benjamin, 47 Westwood Rd. 06117
Lippman, Mrs. Leonard, 133 Kirkwood Rd. 06117
Lischner, Mrs. Moses D., 3 Lawler Rd. 06117
Liss, Mrs. Joseph, 130 Richmond La. 06117
Locke, Mrs. Harry, 20 Woodruff Rd. 06107
Low, Mrs. Henry, 1 Mountain Farms Rd. 06117
Lublin, Mrs. Raymond D., 19 Fulton Pl. 06107

Malinconico, Mrs. Lawrence L., 200 Westmont 06117
Mancoll, Mrs. Morris M., 285 North Quaker Lane 06119
Mandell, Mrs. Julian, 65 Sunrise Dr. 06107
Mantel, Mrs. Fred, 68 Bainton Rd. 06117
Marino, Mrs. Frank S., 126 Pioneer Dr. 06117
Markley, Mrs. D. Norman, 777 Prospect Ave. 06117
Martin, Mrs. Stevens, 180 Fern St. 06117
McCawley, Mrs. Austin, 87 Pilgrim Rd. 06117
McCloskey, Mrs. Edwin M., 42 Sheep Hill Dr. 06117
McCooey, Mrs. John H., 527 Mountain Rd. 06107
McCormick, Mrs. James M., 110 Mountain Terrace Rd. 06107
McGowan, Mrs. George E., 154 Clifton Ave. 06107
Meridy, Mrs. Howard, 115 Mohegan Dr. 06117
Miller, Mrs. Bennett, 46 Whetten Rd. 06117
Mittelman, Mrs. Michael, 1075 N. Main St. 06117
Molloy, Mrs. Robert J., 29 Fulton Pl. 06107
Moskowitz, Mrs. Harold, 14 Arlen Way 06117
Myerson, Mrs. Manny, 22 Palmer Dr. 06117

Nakhoul, Mrs. Jabbour, 34 Timrod Rd. 06107
Nathanson, Mrs. Robert, Morton Lane 06117
Nino, Mrs. Alfredo, 162 Hunter Drive 06107
Nolan, Mrs. John O'L., 1 Orchard Lane 06117

O'Brien, Mrs. Frederick J., 75 Bainbridge Rd. 06119
O'Brien, Mrs. John J., 22 Duffield Dr. 06107
O'Connell, Mrs. Paul, 20 Glen Hollow Rd. 06117
O'Connell, Mrs. John D., 42 Fulton Pl. 06107
O'Hurley, Mrs. John, 71 Westmont 06117
O'Keefe, Mrs. David F., 93 Newport Ave. 06107
Opinsky, Mrs. Morton, 47 Mountain Farms Rd. 06117

Perkins, Mrs. Joseph A., 16 Webster Hill Blvd. 06107
Perovitch, Mrs. Milos, 5 Bishop Rd. 06119
Piacente, Mrs. Salvatore S., 107 Brookside Dr. 06107
Pitegoff, Mrs. Gerald I., 73 Norwood Rd. 06117
Polidoro, Mrs. Joseph R., 15 Pheasant Hill Drive 06107
Prestley, Mrs. William F., 519 Mountain Rd. 06117
Pyrtek, Mrs. L. J., 145 Walbridge Rd. 06119

Radding, Mrs. Philip, 89 Lyman Rd. 06117
Rentz, Mrs. Robert, 9 Manor Lane 06107
Riddick, Mrs. Daniel H., 142 Whiting La. 06119
Ridlon, Mrs. Herrick C., 14 Glendale Rd. 06107
Ritvo, Mrs. Arnold, 15 Rushleigh Rd. 06117
Robertson, Mrs. Russell, 53 Westwood Rd. 06117

Robinson, Mrs. David, 69 High Ridge Rd. 06117
Rogers, Mrs. Henry, 20 Brenway Dr. 06117
Rosenbaum, Mrs. George J., 16 Vardon Rd. 06117
Rosenberg, Mrs. Jack E., 114 Kirkwood Rd. 06117
Rosenberg, Mrs. Mervin, 65 Brewster Rd. 06117
Rosenthal, Mrs. Ernest, 17 Pine Rd. 06119
Rosenthal, Mrs. Irving I., 16 Northcliff Dr. 06117
Rossi, Mrs. Michael A., 136 Orchard Rd. 06117
Rotenberg, Mrs. Donald A., 15 Adams Lane 06117
Rothstein, Mrs. Isadore, 90 Haynes Rd. 06117
Ruderman, Mrs. Mark, 54 West Normandy Dr. 06107

Sachs, Mrs. Julius J., 22 Harvest Lane 06117
Sadowski, Mrs. Joseph S., 150 Beacon Hill Dr. 06117
Sappington, Mrs. Joseph, 14 Avondall Rd. 06117
Satloff, Mrs. David M., 22 Forest Hills Dr. 06117
Saxon, Mrs. Ronald, 7 Arlen Way 06117
Schloss, Mrs. Walter A., 31 Brookside Blvd. 06107
Schulyer, Mrs. Samuel, 304 Steele Rd. 06117
Secor, Mrs. Ralph, 446 South Quaker La. 06110
Seide, Mrs. Morris J., 31 Cumberland Rd. 06119
Seigle, Mrs. Stewart P., 28 Northfield Rd. 06107
Sennett, Mrs. Edward J., 29 Scars ale Rd. 06107
Sheehan, Mrs. George D., 91 Four Mile Rd. 06107
Shelton, Mrs. Philip A., 70 Norwood Rd. 06117
Shoukimas, Mrs. John, 26 Pheasant Hill Dr. 06107
Sicklick, Mrs. Elliot, 33 High Wood Rd. 06117
Silbermann, Mrs. S. Joseph, 144 Haynes Rd. 06117
Smith, Mrs. Leonard, 35 Walbridge Rd. 06119
Soares, Mrs. Manuel J., 98 Sunny Reach Dr. 06117
Spekter, Mrs. Louis, 87 Mohawk Dr. 06117
Spillane, Mrs. Richard J., 14 Northfield Rd. 06107
Stack, Mrs. William J., 69 Meadow Lane 06107
Stier, Mrs. Steven A., 55 Old Oak Rd. 06117
Storrs, Mrs. Ralph W., 64 Orchard Rd. 06117
Sullivan, Mrs. Paul R., 337 N. Steele Rd. 06117

Teahan, Mrs. John W., 7 Hillsboro Dr. 06107
Tennant, Mrs. Robert, 30 Ten Acre Lane 06107
Thaw, Mrs. B. D., 15 Brookside Place 06107
Thomas, Mrs. John B., 85 Uplands Dr. 06107
Thompson, Mrs. H.G., 55 Hunter Dr. 06107
Trowbridge, Mrs. Philip E., 14 Dodge Dr. 06107
Tucker, Mrs. Charles A., 7 Wintergreen Lane 06117
Tucker, Mrs. Jolyon S., 89 Brookside Dr. 06107

Ungar, Mrs. Joseph S. Timrod Lane 06107

Walton, Mrs. Loftus, 64 Brenway Dr. 06117
Wardner, Mrs. LeRoy H., 64 High Farms Rd. 06107
Wawro, Mrs. N. William, 44 Walbridge Rd. 06119
Welch, Mrs. Edmund T., Jr., 5 Manor Lane 06107
Welch, Mrs. John P., 15 Stoner Dr. 06107
Whitcomb, Mrs. Benjamin B., 38 High Farms Rd. 06107
White, Mrs. Kenneth H., 47 Westminster Dr. 06107
Winters, Mrs. John T., 19 Linbrook Rd. 06107
Wood, Mrs. Frank O., 28 Gloucester Lane 06107
Woodruff, Mrs. John H., 10 Sunfield Lane 06107

Zarkin, Mrs. Oscar H., 186 North Main 06107
Zeman, Mrs. Peter, 1890 Asylum Ave. 06117
Zenter, Mrs. Arnold, 36 Claybar Dr. 06117
Zimmerman, Mrs. Richard, 82 Parsons Dr. 06117

WEST SIMSBURY 06092

LoPresti, Mrs. Daniel A., 19 Fox Den Rd.

WETHERSFIELD 06109

Agee, Mrs. Fred B., Jr., 51 Westway
Ahrens, Mrs. Lawrence, 21 State Street
Aseltine, Mrs. Deal T., Jr., 99 Robeth Lane
Beakey, Mrs. John F., 256 Clearfield Rd.
Beck, Mrs. Roger S., 305 Dale Rd.
Boelhouwer, Mrs. Cornelius, 359 Pine Lane
Butterfield, Mrs. Walter L., 26 Saxon Rd.
Casale, Mrs. Albert, 57 Rand La.
Callan, Mrs. John, 425 Coppermill Rd.
Cavalieri, Mrs. Rinaldo, 454 Highland
Curtiss, Mrs. Burr, 98 Highcrest Rd.
DePasquale, Mrs. John A., 732 Prospect
Fisher, Mrs. Robert L., 500 Highland
Gallivan, Mrs. John N., 951 Ridge Rd.
Giosa, Mrs. Nicholas, 463 Brimfield Road
Giuliano, Mrs. Sebastian, 270 Wolcott Hill Rd.
Gorman, Mrs. Arthur T., 3 Baneberry Lane
Hellijas, Mrs. Carl S., 4 River Rd.
Izard, Mrs. Mark W., 35 Broad Street
Johnston, Mrs. J. Howard, 522 Wolcott Hill Rd.
Lehmann, Mrs. William B., 3 Halfpenny Lane
Murphy, Mrs. Robert D., 404 Wolcott Hill Rd.
O'Brien, Mrs. E. James, 31 Surrey Dr.
Palermino, Mrs. Donato A., 78 Baneberry Lane
Reed, Mrs. John F., 381 Wolcott Hill Rd.
Reinfrank, Mrs. Ralph F., 208 Highland
Ryan, Mrs. William D., 200 Ox Yoke Dr.
Serafini, Mrs. Ferdinand F., 41 Wells Farm Dr.
Shea, Mrs. William P. III, 78 Robeth Lane
St. John, Mrs. Nicholas E., 375 Ridge Rd.
Steege, Mrs. Theodore W., 29 Eastern Dr.
Trench, Mrs. James M., 12 Eastern Dr.

WINDSOR 06095

Keefe, Mrs. Raymond B., 1305 Windsor Ave.
Mack, Mrs. Daniel E., 932 Windsor Ave.
Silliman, Mrs. Warren B., P. O. Box 508,

OUT-OF-COUNTY MEMBERS

Coelho, Mrs. Julio N., South St., Coventry Ct. 06238
Czarsty, Mrs. Joseph, 314 Main, Oakville 06779
Ulreich, Mrs. Sidney, 89 Towne House Rd., Hamden, Ct. 06514

Litchfield County

CANAAN 06018

Sellew, Mrs. Robert, Jr., North Elm

LITCHFIELD 06759

Samson, Mrs. Daniel, Sweetbriar Farm

THOMASTON 06787

Wight, Mrs. Winfield K., 24 Goodwin Court

Middlesex County

CHESTER 06412

Nadel, Mrs. Martin, East Liberty

CLINTON 06413

Kerr, Mrs. Robert, P.O. Box 338 Commerce St.
Rindge, Mrs. Norman P., 147 East Main

COLCHESTER 06415

Turano, Mrs. Andrew, Cemetery Rd.

CROMWELL 06416

Adams, Mrs. Henry A., 384 Main
Grant, Mrs. Richard, 482 Main
Nelson, Mrs. Walter, 360 Main

DURHAM 06422

Bird, Mrs. Kenneth, Wildwood Lane
Brown, Mrs. James E., Maple Ave.
Chace, Mrs. Charles W., Cedar Dr.
Donadio, Mrs. Joseph, Blue Hill Rd.
Kalayjian, Mrs. David, Guilford Rd.
Mahmud, Mrs. A. Wazed, Guire Rd.
Morrison, Mrs. John, Creamery Rd., Box 41A
Sosa, Mrs. Juan, Carriage Dr.

EAST HAMPTON 06424

Gardner, Mrs. Norman, 22 Summit
Ghaussy, Mrs. Aziz, 14 N. Main St.
Green, Mrs. Michael, 34 Barton Mill

ESSEX 06426

Bardenheier, Mrs. Joseph, Hemlock Dr.
Dwyer, Mrs. Robert, Ingham Hill Rd.
James, Mrs. Raymond, River Rd., Millstone Hill
Lobb, Mrs. Russell A., Long Hill Rd., P.O. Box 78B

HADDAM 06438

Arena, Mrs. Anthony, Meeting House Rd.
Buckley, Mrs. Willard E., Oak Ridge Dr.
Concannon, Mrs. Patrick, Timms Hill Rd.
Gorin, Mrs. Malcolm, Timms Hill Rd.
Graig, Mrs. George Mansfield, Saybrook Rd.
Kaufman, Mrs. Herbert, Oak Ridge Dr.
Miller, Mrs. Donald, Timms Hill Rd.

HIGGANUM 06441

Bertuch, Mrs. William, P. O. Box 382
Borkowski, Mrs. John, Valley Ridge
Buchalter, Mrs. Daniel J., Saybrook Rd.
Calhoun, Mrs. Hazen A., Main
Catrini, Mrs. Vincent, Skunk Misery Rd.
Kilga, Mrs. Lawrence, Lieutenant Shubael Rd.
Korab, Mrs. John J., Saybrook Rd.
Longo, Mrs. Edward, Skunk Misery Rd.
Macionus, Mrs. Raymond, Skunk Misery Rd.
McCarthy, Mrs. Robert, Bartman Rd.
McDowell, Mrs. Arthur, Christian Hill Rd.
Rabuffo, Mrs. Jeffrey, Skunk Misery Rd.

KILLINGWORTH 06417

Greenway, Mrs. Michael D., RFD #2

MIDDLEFIELD 06455

Fiducia, Mrs. Joseph, Rosemary Ct.

MIDDLE HADDAM 06456

Clark, Mrs. Samuel, Keighley Pond Rd.

MIDDLETOWN 06457

Abad, Mrs. Alec, P. O. Box 557
Arafeh, Mrs. Mehadin K., 1 Harvey Dr., Box 351
Bernstein, Mrs. Alan, Maple Shade Rd.
Cerritelli, Mrs. Dominick, Flynn La.
Crampton, Mrs. Clair B., 158 Mt. Vernon
Flanagan, Mrs. Joseph, 844 Long Hill Rd.
Ganquli, Mrs. Prabhash, 251 Old Mill Rd.
Grower, Mrs. Juluis, 70-B Rose Circle
Harvey, Mrs. Sanford, Ballfall Rd.
Harwood, Mrs. Clarence W., 135 Old Mill Rd.
Hoffman, Mrs. Daniel, Clover St.
Kelly, Mrs. John F., 256 Old Mill Rd.
LaBella, Mrs. Louis O., 10 Poinsettia
Lee, Mrs. John, 96 Olympus Pkwy.
Manzi, Mrs. Joseph, 195 Old Mill Rd.
Minor, Mrs. Lloyd, 329 Coleman Rd.
Palmieri, Mrs. Mario, 200 Coleman Rd.
Pennington, Mrs. Robert B., 779 Ridge Rd.
Perlin, Mrs. Louis, Oakcliff Rd.
Prins, Mrs. Sal A., 67 Old Mill Rd.
Robbins, Mrs. Kenneth, 10 Yellow-Birch Rd.
Roccapriore, Mrs. Benjamin, Olympus Parkway
Schwartz, Mrs. Philip E., 74 Lisa Lane
Shenker, Mrs. Benjamin, 46 Pine
Sherwood, Mrs. Henry, 580 Kelsey
Soreff, Mrs. Louis, 148 Margarite Rd.
Thumin, Mrs. Mark, Maple Shade Rd.
Tracy, Mrs. F. Erwin, 202 Old Mill Rd.
Vinci, Mrs. Vincent J., Randolph Rd.
Yue, Mrs. James Kar-kee, Coleman Rd.
Zavod, Mrs. Robert, 1 Yellow-Birch Rd.
Zelinka, Mrs. Miloslav, 11 Red Yellow Rd.

MOODUS 06469

Berwick, Mrs. Phillip, Plains Rd.

OLD SAYBROOK 06475

Baldwin, Mrs. David, 14 Pheasant Hill La.
Niejadlik, Mrs. Daniel, 12 Watrous Point Rd.
Rowett, Mrs. Dale, Pheasant Hill La.
Thomas, Mrs. Eric, 395 Main St.

PORTLAND 06480

Alexander, Mrs. Stanley, 85 High, P. O. Box 67
Andrus, Mrs. Wayne, Stonegate Dr.
Brown, Mrs. Dewees, 21 Michele Dr.
Burke, Mrs. Gerald, Farm Lane
Ceulemans, Mrs. Cyril, 4 Hall Hill Rd.
Crowther, Mrs. Daniel, Farm Lane
Dooley, Mrs. John, Michelle Dr.
Eckhart, Jr., Mrs. Kenneth, 32 Michelle Dr.
Epstein, Mrs. Joseph, P. O. Box 227
Hickox, Mrs. David, Jobs Pond Rd.
Longo, Mrs. Americo, 344 Main St.
Lambe, Mrs. Thomas, Scenic Dr.
Rosenbaum, Mrs. Howard, 87 William St.
Rosenfeld, Mrs. George M., 87 Bartlett St.
Silberstein, Mrs. Allen, 68 William
Stoane, Mrs. Leonard, 7 Clearview Dr.
Thomson, Mrs. A. W., 73 William
Waldman, Mrs. Arthur, Farm Lane

OUT-OF-COUNTY MEMBERS

Gallo, Mrs. Sebastian, 18 Robeth La., Wethersfield 06109
Lehrman, Mrs. Jerrold C., 925 Knollwood Circle,
Cheshire 06410

New Haven County

BRANFORD 06405

Cipriano, Mrs. Anthony P., 37 Island View Ave.
Conte, Mrs. Harry C., 15 Pawson Landing Dr.
Errico, Mrs. Austin, 45 Sagamore Cove
McKeon, Mrs. James, Harbour Village 27-C
Ranieri, Mrs. Alfred, 8 Oakdale Rd.
Reisman, Mrs. John P., Hearthstone, Boston Post Rd.
Vegliante, Mrs. Michael, 31 Castle Rock

CHESHIRE 06410

Kramer, Mrs. Fred, 18-19 Currier Way
Manes, Mrs. Peter R., 270 Nob Hill Rd.

DERBY 06418

Iannotti, Mrs. Salvatore, 10 Lombardi Dr.
Narowski, Mrs. John, 153 Sentinel Hill

HAMDEN

Camilleri, Mrs. Joseph, 835 Ridge Rd. 06517
Cassin, Mrs. Carl, 947 Choate Ave. 06518
Coe, Mrs. Ronald E., 1727 Whitney Ave. 06517
Culotta, Mrs. Charles, 2714 Whitney Ave. 06518
Greenwald, Mrs. Willard, 1125 Ridge Rd. 06517
Harvard, Mrs. B. Marvin, 105 Spring Glen Terr. 06517
LaFemina, Mrs. Nicholas, 60 Dawes Ave. 06514
Levenstein, Mrs. Marvin, 146 Shepards Knoll Dr. 06514
Levis, Mrs. Albert, 22 Spring Glenn Ter. 06517
McDonnell, Mrs. Robert, 978 Ridge Rd. 06517
Mendillo, Mrs. John J., 25 Tokeneke Dr. 06518
Olson, Mrs. Lowell, 85 River Rd. 06518
Radowiecki, Mrs. M Walter, 196 Corbin Rd. 06517
Richards, Mrs. William R., 116 Brook 06514
Wong, Mrs. Andrew, 260 Blue Trial 06517

MERIDEN 06450

Carey, Mrs. William C., 136 Eaton Ave.
Fritz, Mrs. Harvey, 141 Overlook Dr.
Guttenberg, Mrs. Irving, 21 Reynolds Dr.
Pierson, Mrs. Louis A., 130 Bradley Ave.
Wagshul, Mrs. Ely, 1 Brownstone Ridge

MIDDLEBURY 06762

Liao, Mrs. Sung J., Sky Line Dr.
Mari, Mrs. Eduardo, Park Rd. Ext.
Reed, Mrs. David, 202 Central Rd.
Ryan, Mrs. Sylvester, Breakneck Hill
Sharian, Mrs. Kent, 81 Carriage Dr.

MILFORD 06460

Barney, Mrs. Walter E., 35 Prospect

NAUGATUCK 06770

Cornacchia, Mrs. Rocco, 567 Field

NEW HAVEN

Albom, Mrs. J. J., 200 Fountain 06515
Amatruda, Mrs. Frank, 8 Beechwood La. 06511
Amore, Mrs. Frederick, 167 Maple 06511
Barker, Mrs. Creighton, 119 Armory 06511
Bratu, Mrs. Marcel, 20 Wellington Rd. 06515
Chetrick, Mrs. Allen, 78 Marlin Dr. 06515
Clement, Mrs. David, 237 East Rock Rd. 06511
Climo, Mrs. Samuel, 25 Woodside Ter. 06515
Etkind, Mrs. Meyer, 1546 Chapel St. 06511
Freedman, Mrs. Barnett, 111 Park 06515
Freedman, Mrs. Jerome, 460 St. Ronan 06511
Gold, Mrs. Jeffery, 91 Curtis Dr. 06515
Holley, Mrs. Marshall, 215 Stimson Rd. 06511
Levin, Mrs. Hyman, 168 Linden 06511
Levine, Mrs. Julius, 125 Kohary Dr. 06515
Mahnensmith, Mrs. Rex L., 145 Cottage 06511
Passarelli, Mrs. Nicholas L., 2055 Chapel 06515
Piccolo, Mrs. Pasquale, 508 Yale Ave. 06515
Pinkes, Mrs. Alexander, 183 Bishop St. 06511
Silberstein, Mrs. Morton, 25 Colony Rd. 06511
Silverberg, Mrs. Samuel, 140 Laurel Rd. 06515
Swirsky, Mrs. Morgan Y., 280 McKinley Ave. 06515
Wolff, Mrs. Emanuel, 251 Edwards 06511
Zagraniski, Mrs. Raymond J., 675 Fountain 06515

NORTH HAVEN 06473

Baskin, Mrs. Arnold W., 26 Old Orchard Rd.
Davey, Mrs. Lycurgus M., 1010 Hartford Tpke.
Dolinsky, Mrs. A. H., 12 Crestview Dr.
Fezza, Mrs. Andrew, 20 Westview Rd.
Fischer, Mrs. Daniel, 22 Windsor Rd. East
Goodman, Mrs. Alan, 23 Primrose St.
Kessler, Mrs. Frederick, 20 Dogwood Rd.
Lujic, Mrs. Peter, 1776 Ridge Rd.
Morgan, Mrs. Walter, 41 Tokeneke Dr.
Noto, Mrs. Philip, 17 Marion
Parisi, Mrs. Anthony, 30 Windsor Rd.

ORANGE 06477

Brodoff, Mrs. Murray, 21 Williamsburg Dr.
Habib, Mrs. Nabil I., 839 Robert Treat Ext.
Holden, Mrs. Jack, 814 Grassy Hill Rd.
Hurwitz, Mrs. Sidney, 35 Williamsburg Dr.
Kreis, Mrs. David, 42 Whitney Lane
Landau, Mrs. Jack, 154 Englewood Dr.
Lanzi, Mrs. Robert, 64 Hall
Lattanzi, Mrs. William, 834 Dentree Dr.
Lebson, Mrs. Robert, 983 Rainbow Trail
Lin, Mrs. Paul T-C., 609 Chestnut Ridge Rd.
Manjoney, Mrs. Richard C., 760 Dennis Dr.
Marieb, Mrs. Norman, 266 Hemlock Dr.
Milazzo, Mrs. Nicholas, 173 Englewood Dr.
Petrillo, Mrs. Charles, 66 Derby Ave.
Phillips, Mrs. Carlton, 682 Estelle Ct.
Rifkin, Mrs. Boris, 399 Clark Lane
Sikorski, Mrs. Jerzy, 238 Harverster Rd.
Turkalo, Mrs. J. R., 894 Orange Center Rd.

SHELTON 06484

Galen, Mrs. Jack H., 93 Myrtle
Roach, Mrs. Donald, 40 Judson Circle

SOUTHBURY 06488

Summa, Mrs. John, Bucks Hill Rd.

WALLINGFORD 06492

Fazzone, Mrs. Philip, 290 Cook Hill Rd.

WATERBURY

Blank, Mrs. Samuel, Southwest Rd. 06708
DePetrillo, Mrs. Bart, 619 Willow 06710
Eguia, Mrs. Jose, 164 Harwood Rd. 06706
Eslami, Mrs. Mehdi, 139 Eastfield Rd. 06708
Gualtieri, Mrs. Michael, 55 Forest Ridge Rd. 06709
Koleshko, Mrs. Lawrence, 1022 Bunker Hill Ave. 06708
Lenkowski, Mrs. William, 107 West Ridge Dr. 06708
Mayo, Mrs. Elliott Russell, 129 Prospect 06702
Nezhad, Mrs. Michael F., 35 Campfield Rd. 06708
Posada, Mrs. Humberto, 46 Stephana La. 06710
Reynolds, Mrs. Joseph, 185 Pine 06710
Root, Jr., Mrs. James H., 87 Highland Ave. 06708
Rosenbaum, Mrs. Haskell, 161 Avalon Circle 06710
Santopietra, Mrs. Olindo, 241 Forest Ridge Rd. 06708
Segall, Mrs. Edward, 162 Southwind Rd. 06708
Sullivan, Mrs. Arthur, 493 Willow 06710
Tormo, Mrs. Vincent, 76 Robinwood Ave. 06708
Traurig, Mrs. Allen, 166 Avalon Circle 06710
Veiga, Mrs. A. S., 55 Eastfield Rd. 06708
Weisberg, Mrs. H. E., 232 Maybrook Rd. 06708
Villa, Mrs. Alberto, 625 Country Club Rd. 06708
Yavetz, Mrs. Louis, 184 Columbia Blvd. 06710

WEST HAVEN 06516

Job, Mrs. Gil, 32 Priscilla Rd.
Milano, Mrs. N. A., 277 Elm
Milici, Mrs. John J., 354 Campbell Ave.
Mujtaba, Mrs. Qaiyum, 78 Savin Ave.
Tierney, Mrs. Lawrence, 246 Elm

WOLCOTT 06716

Whalley, Mrs. Evan, 76 Pratt Lane

WOODBRIDGE 06525

Alpert, Mrs. Abraham, 21 Wolf Tree Dr.
Arons, Mrs. Marvin, Hunting Hill Rd.
Berneike, Mrs. Robert, Hickory Rd.
Brochin, Mrs. Malcolm, Hemlock Hollow Rd.
Davidson, Mrs. Alan, 15 Edge Hill Dr.
Etkind, Mrs. Ewald, 1 Bright Wood Dr.
Gagliardi, Mrs. Joseph, Jr., Forest Glen Dr.
Goetsch, Mrs. John, Cleft Rock Lane
Goodrich, Mrs. Isaac, 15 Birch Dr.
Gruskay, Mrs. Frank, Pine Ridge Rd.
Hurwitz, Mrs. Sidney, 35 Williamsburg Drive
Ingenito, Mrs. Gabriel, 181 Center Rd.
Kra, Mrs. Siegfried, Pleasant Hill Rd.
Laubstein, Mrs. Melvin, Richard Sweet Dr.
Maric, Mrs. Radoslav, 77 Ford Rd.
Mattie, Mrs. Louis R., Dogwood Circle
Petrie, Mrs. Stewart J., 16 Wolf Tree Dr.
Polayes, Mrs. Irving, 49 North Racebrook Rd.
Savin, Mrs. Ronald, Edgehill Dr.
Scarpa, Mrs. Francis J., 38 Richard Sweet Dr.
Schioppo, Mrs. Dominic B., 46 Newton Rd.
Sumner, Mrs. Martin, Dickinson Dr.
Weisinger, Mrs. Philip, Blue Trail Dr.
Wirth, Mrs. Michael N., Pine Ridge Rd.
Wolff, Mrs. E. Manuel, 1 Sperry Rd.

OUT-OF-COUNTY MEMBERS

Buckley, Mrs. Michael, 82 Nova Scotia Hill Rd., Watertown 06795
Collins, Mrs. Joseph O., 326 Woodbury Rd., Watertown 06795
Czarsty, Mrs. Joseph C., 18 Hillside Ave., Oakville, Ct. 06779
Sherman, Mrs. Joel, 343 Concord Dr., Watertown 06795

New London County

BALTIC 06330

Browning, Mrs. S. Pearce III, 671 Scotland Rd. R.F.D. 1
Oakley, Mrs. David E., Box 717

COLCHESTER 06415

Conrad, Mrs. Carl, R.F.D. 2, Palmer Rd.

EAST LYME 06333

Brent, Mrs. Richard, 4 Legendary Road
Edgar, Mrs. Edward, 9 Black Oak Dr.
Fleisher, Mrs. Paul, 19 Legendary Rd.
Immordino, Mrs. Peter A., 351 B Boston Post Rd.
Madsen, Mrs. John E., Jr., 52 Heritage Rd.
Saxe, Mrs. Louis, 3 Colonial Dr.

JEWETT CITY 06351

Gosselin, Mrs. Albert, R.F.D. #4

GROTON 06340

Brown, Mrs. Walter, 91 Broad
Hollister, Mrs. James M., 76 Starr Hill Rd.
Holt, Mrs. Edward, 145 Military Highway
Kuhn, Mrs. Frank, Clubhouse Rd., Groton Long Point

LEBANON 06249

Springer, Mrs. Gerald, Rt. 87 R.D. #1

LYME 06371

Cavicke, Mrs. David, Joshua Rd.

MYSTIC 06355

Kaplan, Mrs. Donald, Scott Lane
Plankeel, Mrs. John, 66 Hilltop Rd.

NEW LONDON 06320

Beatman, Mrs. Bernard, 16 Niles Hill Rd.
Becker, Mrs. Joseph, 2 Henderson Rd.
Bobruff, Mrs. Jerome, 765 Pequot Ave.
Ellison, Mrs. Malcolm, 960 Ocean Ave.
Gerity, Mrs. Paul, 16 Hillside Rd.
Hendel, Mrs. Isadore, 336 Pequot Ave.
Karno, Mrs. Martin, 894 Ocean Ave.
Krinsky, Mrs. Charles M., 943 Ocean Ave.
Lena, Mrs. Hugh F., Jr., 60 Broad
Loiacono, Mrs. Richard, 61 Parkway South
Longo, Mrs. Vincent, 967 Pequot Ave.
Makover, Mrs. Richard, 40 Mott Ave.
Mariani, Mrs. Roland, 899 Ocean Ave.
Nielsen, Mrs. Tage, 1024 Pequot Ave.
Olsen, Mrs. Robert C., 685 Pequot Ave.
Pembroke, Mrs. Richard C., 464 Ocean Ave.
Peterson, Mrs. David, 210 Gardner Ave.
Reich, Mrs. Louis H., 292 Montauk Ave.
Roe, Mrs. C. Francis, 774 Ocean Ave.
Schmidt, Mrs. William, 8 Hillside Rd.
Spitz, Mrs. Hilliard, 17 Henderson Rd.
Sprecace, Mrs. George, 33 Hillside Rd.
Sulman, Mrs. Morris, 737 Pequot Ave.
Wies, Mrs. Carl, 756 Pequot Ave.

NIANTIC 06357

Barrera, Mrs. Alberto, 5 D Churchwood
Dey, Mrs. Frederick, 15 Smith Ave.
Fulchiero, Mrs. Egidio, 9 Laurel Hill Drive So.
Kramm, Mrs. William A., 70 Hope
Reilly, Mrs. John, 55 Terrace
Schloz, Mrs. Dieter, 62 S. Ledge Rock Rd.
Solin, Mrs. Michael E., 39 West End Ave., Attawan Beach

NORWICH 06360

Ahamad, Mrs. Sultan, 39 Tanglewood Dr.
Albamonti, Mrs. Mario J., 46 Rockwell
Archambault, Mrs. Henry, 18 Wayne
Barrett, Mrs. Frederick, 256 Broadway Ave.
Bergendahl, Mrs. Gilbert, R.F.D. #1
Bergendahl, Mrs. H., 17 Huntington Lane
Betten, Mrs. Michael, R.F.D. #2
Bielecki, Mrs. Casimir, 40 Harland Place
Carter, Mrs. Frank, 76 Briar Hill Road
Coletti, Mrs. Larry, 34 Gulliver Circle
Costa, Mrs. Pasquale, 44 Gulliver Circle
Cranston, Mrs. Robert J., 43 Ox Hill Rd.
Crootof, Mrs. Robert, Elm St.
DeGroot, Mrs. Theodore, 18 Broad St.
Eadie, Mrs. Frederick, 5 Chelsea Parades
Esfahanian, Mrs. Said, 91 Sherwood Lane
Friedman, Mrs. Franklin P., 41 Reservoir Rd.
Gilmartin, Mrs. Daniel, 117 Mediterranean Lane
Glenney, Mrs. Christopher, 16 Huntington Lane
Goldblatt, Mrs. Jeffrey, 18 Huntington Lane
Greene, Mrs. Leonard, 260 Washington St.
Griffin, Mrs. Clement, 22 Briar Hill Rd.
Gulino, Mrs. Angelo, 15 Campion Ave.
Guss, Mrs. Louis, 59 Sachem Rd.
Harkins, Mrs. James A., 98 Case
Hong, Mrs. Ben, 167 Washington
Joseph, Mrs. Julien L., Scotland Rd., R.F.D. 4
Kalams, Mrs. Zanis, 74 Case
Kantharaj, Mrs. A. J., 42 Tanglewood Drive
Katz, Mrs. Morris E., 24 Broad
Kerrigan, Mrs. Robert, Mediterranean Lane
Kropp, Mrs. Peter, 4 Dellwood Rd.

Lee, Mrs. Woong Bum, 80 Sherwood La.
Lesnik, Mrs. Thomas, 27 Scotland Rd.
Lord, Mrs. Benjamin J., 51 Canterbury Tpke.
Mahoney, Mrs. Joseph, 74 Ox Hill Rd.
Mandell, Mrs. Harvey, Indian Spring La.
Martin, Mrs. John, 28 Montgomery Lane
Martin, Mrs. Morgan, Box 508, Norwich State Hospital
Masterson, Mrs. Thomas, 23 East Town
McKeon, Mrs. William, 18 Sherwood Lane
Morrison, Mrs. John, 11 Lincoln Ave.
Okasha, Mrs. Mahmoud, Sherwood Lane
Oppenheimer, Mrs. Kurt, 8 Dupont Lane
O'Toole, Mrs. Peadar, Norwich State Hospital, Box 508
Parthenis, Mrs. Alex, Box 508 Norwich Hospital
Pastel, Mrs. Neil, Pine Brook Village, Sheraton Lane
Phillips, Mrs. Nicholas T., 14 Montgomery Lane
Podurgiel, Mrs. Bernard J., 188 Harland Rd.
Quintiliani, Mrs. Albert, 35 Williams St.
Richeimer, Mrs. William, 32 Lyman Hill Rd.
Rosenberg, Mrs. Peter J., 420 Washington
Rousseau, Mrs. David, Case
Saracino, Mrs. Luigi, Box 508
Sawyer, Mrs. David, 236 Washington
Schwarz, Mrs. H. Peter, 172 Washington
Sculco, Mrs. Mario, 195 Washington
Sears, Mrs. Lewis, 14 Julian
Taylor, Mrs. K. Stephens, 34 Rockwell St.
Thompson, Mrs. Clarence, 324 Canterbury Tpke.
Torres, Mrs. Clemenico, 172 Harland Rd.
Tramontozzi, Mrs. Anthony, R.F.D. 4
Wahba, Mrs. Hany S., Sherwood Dr.
Ward, Mrs. Frnklyn P., 124 N. Wawecus Hill Rd.
Watson, Mrs. James E., 53E Town

NORWICHTOWN 06360
Wilson, Mrs. Clifford, 19 E. Town

OLD LYME 06371
Hostnik, Mrs. William J., Lyme
Klimek, Mrs. Robert, Littlefield La.

OLD MYSTIC 06372
Jones, Mrs. William, North Stonington Rd., Box 164
Jung, Mrs. Robert, Box 183

QUAKER HILL 06375
Starr, Mrs. Richard, 7 Best View Rd.
Wade, Mrs. Philip, 55 Scotch Cap Rd.

SALEM 06415
Bingham, Mrs. David, White Birch Rd.

STONINGTON 06378
Haines, Mrs. Henry, R.F.D. #2

UNCASVILLE 06382
Rasmussen, Mrs. Norman, 92 Depot Rd.

WATERFORD 06385
Bedrick, Mrs. Morton, 141 Oswegatchie Rd.
Behringer, Mrs. Frederick, 14 Susan Ter.
Burton, Mrs. George, 10 Colonial Dr.
Coulson, Mrs. Louis, 58 Ridgewood Ave.
Dyer, Mrs. Charles F., 5 Showandasee Ave.
Kim, Mrs. Albert, 11 Trumbull Rd.
Marchand, Mrs. Gilles, 3 Jonathan Law Ct.
Marx, Mrs. Frank, 58 Gallup Lane
McCue, Mrs. Martin P., 473 Boston Post Rd.
Robinson, Mrs. Charles, 12 Baldwin Dr.
Sprafke, Mrs. Donald, Rogers Hill Rd.

OUT-OF-TOWN MEMBERS
Aromin, Mrs. Salvadore, 24 Prospect St., Moosup, Ct. 06354

Windham County

ABINGTON 06230
Valentine, Mrs. Bruce Robert

ASHFORD 02678
Prescott, Mrs. Blake, R.R.1, Box 188

BROOKLYN 06234
Hogan, Mrs. Austin, Pomfret Road

CANTERBURY 06331
Galasyn, Mrs. Valentine, Buck Hill Rd.

COLUMBIA 06237
Basden, Mrs. Edwin H., Route 87
Becker, Mrs. George E., Lake Rd.

COVENTRY 06238
Bowen, Mrs. Robert Phillip, High Street
Doyle, Mrs. Fred, South River Rd.

DANIELSON 06239
Chartier, Mrs. Gerard, 40 Morin Ave.
Jones, Mrs. James Franklyn, Green Hollow Rd.
Lojko, Mrs. Albert, Lomme St. Ext.
Robinson, Mrs. Lavius, Jr., P.O. Box 610
Weigel, Mrs. Stanley Joseph, 6 Peckham La.

DAYVILLE 06241
Chung, Mrs. Evik, R.F.D. No. 1, Box 460
Dufort, Mrs. Robert, R.F.D. 1, Box 724
Raheb, Mrs. Edmond, R.F.D. 1, Box 702

HAMPTON 06249
Woodworth, Mrs. John Albert, No. Bigelow Rd.

JEWETT CITY 06351
Kennedy, Mrs. George L., 5 Maple

LEBANON 06249
Calise, Mrs. Peter, West Town

MANSFIELD CENTER 06250
Bopp, Mrs. Raymond P., Wormwood Hill Rd.
Lindquist, Mrs. Carl, 494 Wormwood Rd.
Orstein, Mrs. Charles, 68 Bookline Rd.

MOOSUP 06354
Barry, Mrs. E. Arthur, 36 Prospect

POMFRET 06258
Canty, Mrs. William P., Fox Hill Rd.
Danenhower, Mrs. Garfield, Grosvernor Place
Eaton, Mrs. Henry E., Pomfret Center 06259

PUTNAM 06260
Margolick, Mrs. Mose, Genevieve Ext.
Park, Mrs. Sowhey, R.F.D. 2, Putnam Heights
Paulhus, Mrs. John J., c/o Day Kimball Hosp.
Shepard, Mrs. William Mac, R.F.D. No 2

SCOTLAND 06264
Glugover, Mrs. Donald, P.O. Box 68

SOUTH WINDHAM 06266

Rosenberg, Mrs. Paul, P.O. Box 149

SOUTH WOODSTOCK 06267

Middleton, Mrs. Charles J., Ellen La.

STORRS 06268

Beardsley, Mrs. Frederick A., Jr., Dunham Pond Rd.
Bernstein, Mrs. Lawrence, 9 Thomas Drive
Friedman, Mrs. Robert, 49 Ball Hill Rd.
Gilman, Mrs. Ralph L., 3 Willowbrook Rd.
Haney, Mrs. John F. B., 667 Chaffeeville Rd.
Monkowitz, Mrs. Robert I., 9 Thomas Dr.
Rosenberg, Mrs. Murray Z., Birchwood Heights

THOMPSON 06277

Meyer, Mrs. John L., Box 312

WILLIMANTIC 06226

Bolt, Mrs. Ernest A., Jr., 357 Prospect Street
Ferrante, Mrs. Anthony, 112 Sawmill Brook Lane
Flynn, Mrs. J. Dennis, 61 Beech Mountain Rd.
Gibson, Mrs. Luther W., Sycamore Terrace R.F.D. # 4
Griswold, Mrs. Douglas, Beech Mt. Rd. R.F.D. #3
Herbert, Earl A., 144 Beech Mountain Rd. R.F.D. 3
Lee, Mrs. Sangwun, Pigeon Rd.
McPhee, Mrs. Walter, 150 Mansfield Ave.
Rothblatt, Mrs. Reuben, Pigeon Rd.
Sandler, Mrs. Melvin, 282 Church
Sawicki, Mrs. Edward, 124 Beech Mountain Rd.
Shooks, Mrs. Charles, 142 Ox Bow Terrace

WINDHAM 06280

Arnold, Mrs. Morton, Windham Center
Gillcash, Mrs. Robert S., Box 42 Windham Center
Hale, Mrs. Stanton D., Mullen Hill Rd.
O'Brien, Mrs. Gerald J., Windham Center
Sandler, Mrs. Gerald F., Box 115, Windham Center
Whalen, Mrs. William, Windham Center

WOODSTOCK 06281

Diaz, Mrs. Arturo, Route 1, Box 113

WOODSTOCK VALLEY 06282

Klare, Mrs. Rudolph Crystal Pond Rd., Star Route

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